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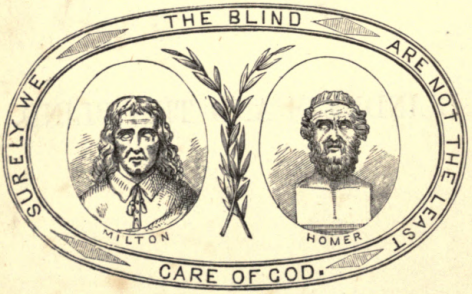
John Walthew
1872

BLINDNESS AND THE BLIND.


SURELY WE
THE BLIND
ARE NOT THE LEAST
CARE OF GOD.
MILTON
HOMER

BLINDNESS AND THE BLIND:

OR,

A TREATISE ON THE

SCIENCE OF TYPHLOLOGY.

BY

W. HANKS LEVY, F.R.G.S.,

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Respectfully Dedicated,

BY PERMISSION,

TO

MISS GILBERT,

DAUGHTER OF THE LATE RIGHT REVEREND
THE LORD BISHOP OF CHICHESTER.

PREFACE.

The author having in the course of his experience acquired a certain amount of information, and arrived at some conclusions, which are considered likely to be of use to the Blind and their friends, has felt it desirable to embody the same in the volume now offered to the public.

For the last twenty-five years it has been his constant practice to make embossed notes of whatever appeared worthy of preservation, his motto being that a thought unrecorded was a thought lost; and seeing that during the whole of that period he has been engaged in matters connected with the Blind, and also that he has been himself without sight from early infancy, it can easily be imagined that a large portion of such memoranda would be on subjects relating to loss of vision.

It was the original design to defer the publication of this work until comparative absence of profes-

sional claims might leave a larger amount of time at the writer's disposal, but of late it has seemed desirable not to delay its appearance any longer, and the result has been the issuing of the book now in the hands of the reader.

In preparing these sheets for the press, it has been found that varied engagements are not necessarily inimical to literary pursuits, and that pressure of business possesses benefits as well as disadvantages even for the lover of books.

There are, however, many subjects on which the author could have desired to dwell more fully, but which for want of time must be reserved for another volume, should circumstances permit the accomplishment of such a task.

MEADOW HOUSE, AVENUE ROAD,
ACTON, LONDON, W.,
November, 1871.

CONTENTS.

BLINDNESS AND THE BLIND.

THE CAUSES OF BLINDNESS AND HINTS FOR THE PRESERVATION OF SIGHT.

As it is generally admitted that blindness is one of the greatest evils to which the human race is liable, it cannot be out of place to take into consideration the nature of the causes which produce so heavy a calamity, and the means best adapted to prevent persons being overtaken by an affliction which is dreaded alike by every class of the community. Until a comparatively recent period small-pox was the most prolific cause of loss of sight, but vaccination has deprived it to a very great extent of its sting.

Small-pox, although deprived of the first place as a destructive agent, still exercises great influence in causing loss of vision. At the present time a very large proportion of the sightless owe their misfortune to the agency of this malady.

To prevent blindness from small-pox, care should be taken to see that every member of the family be properly vaccinated, and it should not be thought sufficient that the operation was performed in infancy, but the process should be repeated at least every three years. Contact with persons suffering from the disease,

or lately recovered from it, should be studiously avoided, unless considerations of duty render such contact unavoidable. In such circumstances plain diet, simple non-infectives, and, above all, strong faith in the goodness of God in summoning to the post of duty, is what becomes the Christian, and is what will prove his best defence against this fearful scourge.

Scrofula is a fruitful source of injury to the eyes; and it is remarkable that while vaccination has greatly limited the ravages of small-pox, it has, on the other hand, been the means of increasing the cases of scrofula. This has arisen from the use of impure virus, thus introducing into the system the germs of disease.

The productive agents of scrofula are—damp and ill-ventilated dwellings, want of cleanliness, insufficient and bad food, and intemperance of all kinds. The blind, owing their privation to this malady, have not merely to contend with the loss of sight, but they have also the misfortune of possessing very weak physical systems. This double affliction makes their position particularly painful, and everything should be done to alleviate their misfortune that can be effected by nutritious diet, pure air, moderate bodily exercise, and diversity of mental employment; and it should never be forgotten that scrofula is one of the diseases in which the evils are not confined to the immediate sufferer, but the ill effects, especially in extreme cases, descend to posterity. This consideration merits great attention, and its importance cannot be over-estimated.

Measles, scarlet-fever, and typhus-fever are among the most potent enemies of sight. Measles as well as small-pox attain their greatest development among the vast populations of China, for in that empire it is estimated that fully one-third of the inhabitants die or become blind from these diseases.

It is remarkable that among the Arabs measles and

small-pox are almost unknown, and it has been conjectured that the reason of this exemption is to be found in the circumstance of their living so much among cattle.

This hypothesis, however, is fairly open to doubt, since it often happens that contagious diseases first arise among cattle, and are thence communicated to the human beings around them; hence the wise precautions taken by civilized governments to prevent disease among animals. There can be little doubt that contact with unhealthy cattle tends to a very large extent to the increase of disease among men, and it may be therefore assumed that the true cause of the exemption of the Arabs from measles and small-pox may be found in their nomadic life, for pure air and healthy exercise are the great antidotes against disease of all kinds, especially those of a contagious nature. It may not be irrelevant to mention here that a few years ago a shopkeeper of Berlin having a son who complained that he could not see so well as usual with one of his eyes, was conducted to the establishment of Dr. Greafe. On examining the patient, the doctor said it was lucky the child had been promptly brought to him, for he declared that immediately behind the iris of the affected eye there was a tapeworm. "This parasite," he added, "would undoubtedly have soon completely destroyed the organ of vision in which it had taken up its quarters." The doctor said, "It was a wonder that such cases were not more frequent; they arose," he observed, "from eating underdone or uncooked meat, and most generally pork."

"In 1867, trichiniasis having reappeared at Berlin, and seventy persons being at one time ill from having eaten of pork bought from one butcher,—Drs. Weiss and Wiessner, of Vienna, undertook many elaborate experiments, with the view of throwing additional light on the awful malady, which it would be out of place to recapitulate here. Suffice it to say that they

calculated that it would take 35,000,000 of trichinæ to equal the weight of one drachm, and that an effectual remedy was at length discovered by the administration to adults of a dose consisting of fourteen grains of hydrosulphide of potash, along with an equal weight of vegetable substance, such as boiled carrot, parsnip, or potato. The origin of the disease was also traced to musty bread, on which the contaminated pigs had fed, in which an insect named the trichinosaurus had deposited its eggs."

A very large proportion of the cases of blindness result from the social habits and the employments of the people. Alexander, the eminent ophthalmic surgeon, says that "the prolific causes of blindness are small print and gaslight." The injurious effects in the latter case seem not so much to result from gaslight *per se* as from the quality of the article employed, it being the custom in many establishments to incorporate quantities of sulphur with the gas, in order to increase the illuminating power at small cost to the manufacturer. It is true that the Legislature imposes fines for such conduct, but the penalties are altogether too small to prevent the evil. It is much to be wished that the medical profession would investigate this subject, with a view, among other things, to determine the smallest print that can be used with safety by the ordinary reader, but in general it may be said that where any one finds his eyes weakened by reading for about half an hour, he should take it as an evidence that the print is too small for him; and it may also be laid down as a safe principle that the less a person reads, even the best print, by gas or any artificial light, the better he will find it for the visual organs.

According to Landsburg, a German chemist, artificial light contains ninety per cent. of calorific rays, while sunlight possesses only fifty; to this predominance of heating power, as compared with illuminating

power in artificial light, he attributes the disagreeable sensation produced upon the eyes. A very thin sheet of mica will intercept the calorific rays and render the light more agreeable.

Reading while travelling by rail should be studiously avoided, for the practice produces blindness, especially among commercial men and those whose professions cause them to travel much. The cause of this appears to be the extra strain on the sight produced by the motion of the vehicle; and it may be interesting to observe that King Frederick of Prussia, who laboured under weakness of the eyes, had a book printed by M. Beaumarchais, of Kehl, on blue paper.

A curious work was published a few years ago at Breslau by Dr. Hermann Cohn, giving the results of an examination of the eyes of 10,000 school-children, when it appeared that the proportion of those who were short-sighted was 17·1 per cent., or more than one-sixth of the pupils. No village children were found to be short-sighted until they had been at least half a year at school. Dr. Cohn attributes the evil in a great measure to the bad construction of school benches, which generally oblige the children to read with inclined heads and the books close to their eyes. Surely this subject is of great importance, and quite worthy the attention of our school-boards.

Large numbers of tailors and dressmakers suffer much from long employment on dark colours, and this suffering is frequently aggravated by their working for many hours by gaslight in crowded and ill ventilated rooms.

The number of cases of blindness which can be directly traced to this source is by no means small, and very frequently when the immediate cause of the affliction is found to be inflammation, there is good reason to believe that the germs of the disease were sown in the workshop.

Although the decline of lace-making has produced

much privation, yet its decay can scarcely be regarded in any other light than that of a blessing, for the corporeal evils inflicted on the workers almost surpass description. Forced to sit for many hours in the same place with the eyes fixed on one spot, with the light almost entirely excluded from the apartment, it is no matter of surprise that at the age of thirty blindness frequently overtakes the unfortunate operative. In Valenciennes the workers, who were formerly reckoned by thousands, usually carried on their occupation in dark cellars, and at the present time in Brussels rooms for lace factories are arranged so that only one ray of light is thrown on the work, and the women employed often become blind from this cause. In our own country, Honiton, in Devonshire, chiefly suffers in this way. So great are the evils produced by lace-making that a competent authority has forcibly said, "It would be a good thing if the work perished out of the world." It may not be out of place to mention that some medical professors say that wearing a green apron tends to lessen the ill effects of fine work on the eyes.

Needle-makers are exposed to peculiar evils from the small particles of steel, thrown off in the process of *dry-grinding*, coming in contact with the eyes and lungs; and it is lamentable to find that although blindness or premature death is almost the certain lot of persons engaged in this trade, yet they generally prefer to risk a great danger, because it is future, rather than put themselves to a slight inconvenience by adopting non-magnifying spectacles to preserve the sight, and respirators to protect the lungs.

Blacksmiths, and those engaged in glass and smelting-houses, often lose their sight from the nature of their employments. Watchmakers are also among those greatly exposed to injury from the over-exertion of their eyes. The effect of the glare of heated metals

on the sight is shown by the fact that in the middle ages, when blindness was inflicted on persons for punishment, this mode was adopted to carry out the barbarous sentence. For instance, we find that the inhabitants of the city of Apollonia executed this sentence upon the men engaged in watching on the walls of their city, they having been found asleep; and also that Amaroth, Sultan of Turkey, having about the year 1400 captured Stephen and Gregory, sons of George the Prince of Servia, at the taking of Sandreez, caused them to be blinded by red-hot plates of brass being kept constantly before their eyes, and thus gradually the humours were dried up, and the coats of the eyes became shrivelled.

We are not told of the mode adopted by the Philistines to deprive Samson of sight, but from the earliest periods, whenever the details of the practice are described, the use of heated plates of metals are also spoken of as the means employed to carry out the diabolical sentence. In all probability Nebuchadnezzar put out the eyes of Zedekiah, King of Judah, by this means, and among the circumstances recorded of forcible deprivation of sight we will only mention here the following, namely :—

Pope Paschal in 824 put out the eyes of every monk who preached fidelity to the Emperor of Germany. In 873 Charles the Bald, King of France, put out the eyes of one of his sons, who, having been made a monk against his will, had escaped and set his father at defiance. About the year 949 Hugh, Duke of Burgundy, put out the eyes of his own brother Lambert. In 1004 the King of Poland conquered Bohemia, and put out the eyes of its duke. But all these horrors are surpassed by the fiendish conduct of Basilius, the Emperor of Constantinople and the East, who having in 1013 defeated the Bulgarians, put out the eyes of his prisoners, 15,000 in number, leaving only one person in a hundred, it is said, with one eye

to guide the poor sightless beings to their homes. It is no wonder that we find it recorded that Samuel, King of the Bulgarians, fell dead on beholding the shocking spectacle.

It is now our painful duty to record that our own native land has also been the scene of this barbarous practice, for we find that in 1067 William the Conqueror, having acquired the greater part of England by the sword, marched westward to reduce those parts, and approached the city of Exeter with a large army. The citizens seem to have been divided as to the policy of resistance. The leading burghers of the pacific faction repaired to the Norman camp, besought the pardon of the king, and having promised fealty, and that they would receive him with open gates, gave such hostages as he required. But when they returned to their fellow-citizens they found themselves outvoted, and the majority resolved upon an obstinate resistance.

William, who was then encamped four miles from the city, pushed forward with five hundred horse, but finding the gates shut, and the walls and bulwarks manned with a great force, he gave orders for his whole army to advance, and *caused the eyes of the unfortunate hostages to be put out in front of the city gates.* The sequel is soon told. After several days' gallant defence, Exeter surrendered, and the inhabitants received favourable terms.

It would seem that blinding was one of the favourite punishments of William the Norman, for in addition to the case already recorded, historians relate that a revolt having taken place in 1074 of various Norman and Saxon nobles, William, after their total defeat near Cambridge, put out the eyes of many of the insurgents; and here it may be interesting to note that Waltheof, the last of the Saxon nobility, was executed in consequence of this abortive insurrection. The evil example of the Conqueror was followed by his

son William Rufus, who during his reign put out the eyes of Count D'Eu, who was accused of treason; he also blinded Donald Blane, the ex-king of Scots.

Another of the sons of William the Conqueror (Henry I.) put out the eyes of the bard Lake de Barré; and he enacted that any purveyor found guilty of a crime against the country should be mulcted in nose, eyes, hands, or feet; and it is even said that Henry destroyed the sight of his own brother Robert, the unfortunate Duke of Normandy.

In the reign of King Stephen, Wimund, an English monk, sometime Bishop and pirate of the Isle of Man, being captured in a foray into England, was deprived of sight and imprisoned for life.

The plan of this work will not permit of a full list of the cases in which blindness has been inflicted as a punishment, and we shall therefore content ourselves by naming a very few more out of the great number to be found scattered through the histories of various countries.

So sanguinary a disposition had Isaac Angelus, Emperor of Constantinople at the end of the twelfth century, that whenever he captured a general who had revolted from him, he caused him to be deprived of sight, and, as insurrections were of frequent occurrence, the number who suffered from his barbarity in this respect was exceedingly great; at length, however, he reaped the due reward of his cruelties, for he was himself blinded and dethroned by his brother Alexis.

In the wars between Richard I. of England and Philip of France, prisoners on both sides were frequently deprived of sight.

In 1261 the young Emperor of Constantinople, John Lascarus, was deprived of sight by the usurper Alexis Strategopulus.

Michael Palæologus, Emperor of Constantinople, having in 1273 determined to unite himself to the

Romish Church, put out the eyes of many of his subjects who refused to renounce the Greek faith.

One of the circumstances which preceded the Swiss war of Independence in 1307 bears on this subject, and it is thus related by Chambers. "As William Tell and his wife sat one evening in front of their cottage, they saw their son rush towards them crying for help and shouting the name of old Melchthal. As he spoke Arnold's father (Melchthal) appeared in view, led by his grand-daughter Clair, and feeling his way with a stick. Tell and his wife hastened forward, and discovered, to their inconceivable horror, that their friend was blind, his eyes having been put out with hot irons.

"The hero of Bürglen, burning with just indignation, called on the old man to explain the fearful sight, and also the cause of Arnold's absence. The unfortunate Melchthal seated himself, surrounded by his agonized friends, and immediately satisfied the impatient curiosity of Tell.

"It appeared that that very morning the father, son, and grand-daughter were in the fields loading a couple of oxen with produce for the market-town, when an Austrian soldier presented himself, and having examined the animals, which appeared to suit his fancy, ordered their owner to unyoke the beasts preparatory to his driving them off. Adding insolence to tyranny, he further remarked that such clodpoles might very well draw their own ploughs and carts. Arnold, furious at the man's daring impertinence, was only restrained by his father's earnest entreaties from sacrificing the robber on the spot; nothing, however, could prevent him from aiming a blow at him, which broke two of his fingers. The enraged soldier then retreated; but old Melchthal, who well knew the character of Gessler (the Austrian Governor), immediately forced Arnold, much against his inclination, to go and conceal himself for some days in the Righi.

a rare circumstance with the Swiss Alps—and is one of the most conspicuous hills of Switzerland. In form a truncated cone, with its base watered by three lakes —Lucerne, Zug, and Zurich—this gigantic hill is pierced by deep caverns, of which two are famous—the Bruder-balm and the hole of Kessis-Boden. Scarcely had Arnold departed in this direction, when a detachment of guards from Altorf surrounded their humble tenement, and dragged old Melchthal before Gessler, who ordered him to give up his son. Furious at the refusal which ensued, the tyrant commanded the old man's eyes to be put out, and then sent him forth blind to deplore his misfortunes."

Andronicus, the eldest son of John Palæologus, Emperor of Constantinople, having in 1367 conspired in connection with Sais, or Kontuses, the son of Amurat, Sultan of the Turks, to dethrone their parents and to possess themselves of the two empires, being captured, the Sultan deprived his own son of sight, and ordered John Palæologus, the Christian Emperor of Constantinople, to follow his example. The Emperor obeyed the Turkish mandate by depriving his son of sight, and also indulged his own evil passions by putting out the eyes of his grandson.

About the year 1490, the last king of the Moors, in Spain, having been expelled from that country by the victorious troops of Ferdinand and Isabella, took refuge with his countrymen in Africa, but being seized and brought to trial by the ruler of Fez, for alleged misconduct while a king, he was cruelly blinded, and wandered about the city of Fez with a label attached to his dress, to the following effect:—"View here the deplorable sovereign of Andalusia!"

About the middle of the sixteenth century Ivan the Terrible, Czar of Muscovy, after the completion of a church of great magnificence in Moscow, ordered the eyes of the architect to be put out, lest he should ever construct another building similar in beauty.

The great Persian conqueror, Nadir Shah, in 1743, added to the many cruelties which disgraced the latter part of his reign by depriving his bravest and eldest son, Rezâ Kouli, of sight; and another Shah of the same country, Aga Mahommed Khan, at the end of the eighteenth century, was also found cruel enough to inflict blindness upon his own brother, and to issue orders that the entire population of the city of Kerman, which he had captured in war, should either be put to death or deprived of sight.

In Tartary, even as late as the middle of the nineteenth century, putting out eyes was common as a punishment until the conquest of that country by the Russians, put an end to the practice; and we deem the subject of sufficient interest to transcribe here the description of this horrid cruelty given by an eminent traveller in Central Asia, Arminius Vanbery. This author, writing in 1864, of what he witnessed at Samarcand in Turkistan, says, "In the first court I found about three hundred highlanders, prisoners of war, covered with rags. They were so tormented by the dread of their approaching fate, and by the hunger which they had endured for several days, that they looked as if they had just risen from their graves.

"They were separated into two divisions, namely, such as had not yet reached their fortieth year and were to be sold as slaves, or to be made use of as presents, and such as from their rank or age were regarded as Aksakals (greybeards) or leaders, and who were to suffer the punishment imposed by the Khan. The former, chained together by their iron collars, in numbers of ten to fifteen, were led away; the latter submissively awaited the punishment awarded. They looked like lambs in the hands of the executioners.

"While several were led to the gallows or the block, I saw, how by a sign from the executioner, eight aged men placed themselves down on their backs on the earth; they were then bound hand and foot, and the

executioner gouged out their eyes in turn, kneeling to do so on the breast of each poor wretch; and after every operation he wiped his knife, dripping with blood, upon the white beard of the hoary unfortunate. Ah! cruel spectacle! As each fearful act was completed, the victim liberated from his bonds, groping around with his hands, sought to gain his feet, some fell against each other, head against head, others sank powerless to the earth again, uttering low groans, the memory of which will make me shudder as long as I live."

In China it seems not at all uncommon for young girls to have their sight extinguished by means of hot needles, in order that the sufferers may be used more successfully as beggars.

The humane Gutzlaff sent four girls to the school of the Society for Teaching the Blind to Read, London; and two to the Pennsylvania Institution, Philadelphia; and it is known that some of those thus rescued lost their sight as above described. In Christian Europe, however, and even in Gutzlaff's own country similar practices are not altogether unknown. It is recorded that the infant child of a German Prince was stolen, deprived of sight, and trained to become a beggar, and also how she was recovered by her mother, educated and married to a prince, her cousin. For the interesting particulars of this truly romantic history the reader is referred to the Appendix.

About the year 1843, a woman was taken in charge by the police for begging on London Bridge with two children, who, she stated, were both blind. On reaching the station-house it was observed that the children cried very much, and that they put their hands to the bandages that covered their eyes. On the removal of the bandages the police were filled with horror, on finding blackbeetles eating into the very eyes of the children, and thus depriving them of that sight, for the loss of which sympathy was being implored by the

inhuman being calling herself a mother. The black-beetles were confined by walnut-shells, and answered the double purpose of destroying the visual organs, and at the same time of making the children cry, so as to excite compassion. We need scarcely say that the woman received the heaviest punishment which an English magistrate could give, and that the children were properly cared for.

Before quitting this subject it may be as well to remark, that in most countries, when the punishment of blinding was intended to be gentle, it was effected by red-hot plates, as already described, but when no mercy was intended to the victim, his eyes were plucked out with the thumb and finger, or crushed with the heel of a boot.

That any one should be found who could wilfully deprive himself of sight seems almost incredible, but instances are recorded of this having been done both in ancient and modern times.

It is said that Democritus the Thracian philosopher, and the contemporary of Socrates, put out his eyes, that he might devote himself more completely to meditation. This is, however, denied by Plutarch. We have a striking example in recent days of how far depravity may reach in the statement made by one of the medical officers of the Ennis Union, Ireland, to the effect that many of the girls in the union had been in the habit for a long period, during several years probably, of producing artificial ophthalmia by rubbing their eyes with a mixture of soap and lime, the motive assigned for this conduct being that they might thereby obtain some longed-for privilege in the shape of improved diet.

Of all the diseases inimical to vision none is more injurious than that of Ophthalmia, which in its general sense signifies inflammation, and may thus be used as representing half the cases of blindness that occur in the world.

Ophthalmia, however, is generally used to indicate the purulent or contagious ophthalmia found in Egypt. It varies very much in its exciting causes. A residence in damp or sandy countries, exposure to the sun, and sudden changes of weather, are among the most usual productive agents of this disease. From this it follows that soldiers and sailors chiefly suffer from its effects, and it is found that from the middle ages to the present time this malady has proved a virulent scourge to the followers of the profession of arms.

In the days of the Crusades, great numbers of those who left their native soil to drive the Infidel from the Holy Land, returned home to deplore through the rest of their days the effects of a climate against which courage had proved useless. It is said that the streets of London, and other English towns, were beset in the twelfth century by large numbers of blind men, who cried out as they felt their way through the streets: "Sainte terre, Sainte terre!" *i. e.* "Holy land, Holy land!" This was to show that they had lost their sight in the Holy Land, and it was doubtless the strongest appeal that could be made for alms to the pious people of those days. In France this evil attracted the attention of the government, and Louis IX., called St. Louis, in 1260, founded an institution for the reception of 300 blind persons. The number of inmates gave name to the establishment, and it has ever since been known as "Les Quinze Vingts," *i. e.* "The Three Hundred." This charity is still in existence near La Place de la Bastille, Paris. Each inmate is allowed a franc and a half a day, and a small room with simple furniture. Both men and women are now admitted, the only qualifications being blindness and poverty. The inmates may have their families with them, and those who choose may live out of the building, but this seems to be considered in the light of an offence, as when they do not live in the house the allowance of a franc

and a half a day is considerably reduced. It may be remarked that Les Quinze Vingts is the oldest institution for the blind in Europe, or perhaps in the world, and we are sure the reader will peruse with interest an episode in the life of one of its inmates, given in another part of this work.

The French army suffered greatly from ophthalmia during their occupation of Egypt, from 1798 to 1801, and the British troops, who wrested that country from them, were no less subject to the ravages of the disease. The position of one afflicted with this painful malady is simply and forcibly described in a little poem by James Downing, who himself became blind while serving in Egypt as an English soldier; and it is felt that a quotation will not be out of place in the Appendix of this volume, to which the reader is referred.

From 1813 to 1815, purulent or Egyptian ophthalmia raged dreadfully in the European armies, and, in the year 1830, it broke out with great intensity among the Belgian troops, and continued its ravages for at least ten years. M. Caffe, writing on this subject in 1840, says, "that since its commencement in 1830, it has affected more than a hundred thousand persons, and has deprived many of their sight. In some regiments more than half the men were attacked.

It seems certain that Ireland has suffered more from ophthalmia than any country in Europe, and among the predisposing causes may be reckoned the workhouses, as managed in that country; the confinement within the dull walls of such establishments, among other evils, entails that of danger to the eyes. The other causes are, the damp climate and the extreme poverty of the people; the last-named not allowing them to have sufficient nutritious food, and obliging them to walk without shoes and to live without proper clothing, and house accommodation. According to the eminent ophthalmic surgeon, Sir W. R. Wild, ophthalmia raged in Ireland

from 1701 to 1862; and from the same authority we gather that this disease gradually increased, so that from 1849 to 1861 no fewer than 199,773, or nearly two hundred thousand persons suffered from this malady in the Irish workhouses alone.

It is not only in Ireland that the workhouse system produces ophthalmia; the English poor are also exposed to its baneful influence. In Dover Union Workhouse, in 1863, more than seventy children were attacked by this epidemic.

The author of the 'Embassy of D. Garcias de Sylva Figueros to Persia' tells us that in several parts of that empire are found vast numbers of blind people, of all ages and conditions, who owe their calamity to a species of small fly, which pricks the eyes and lips and enters the nostrils, and these insects produce blindness whenever they light on the eyes. In China and Australia sight is very frequently destroyed by the dust-showers that prevail at certain seasons. To such an extent, indeed, is this the case in China, that the imperial troops are provided with goggles for the protection of their eyes from this subtle enemy. In northern latitudes sight is greatly affected by the reflection of the sun and the moon upon the snow, and the proportion of the blind is found to be much greater in Northern than in Central Europe. The Esquimaux are very subject to this complaint, from the bright reflection of their snow-fields, and have learned by experience to guard against the danger, by using snow-spectacles, which are simply pieces of wood pierced with small circular holes, bound before their eyes so as to shut out a part of the field from view; and travellers in Arctic regions have found that coloured spectacles answer the same purpose.

No inconsiderable number of persons have never seen the light. Many were born blind, and many more lost their sight from want of proper attention being paid to their eyes immediately after birth.

Loss of sight from birth, or congenital blindness, seems usually to arise from a peculiar state of the nervous system in one of the parents, but chiefly in that of the mother.

Frequently, when one or more children are born blind, others of the same family are either idiotic, deaf, deaf and dumb, or are subject to fits. Often several brothers and sisters are without sight, and the writer is acquainted with twenty-six instances in which this occurs. In one of these cases there are five, in two four, in thirteen three, and in ten two children of the same parents thus afflicted. In one instance three sons are totally deaf, dumb, and blind.

Frequently great weakness of intellect is perceptible in the born blind, and generally the nervous system is peculiarly sensitive.

Sometimes the affliction is ascribed to the mother having seen a blind person before the birth of a child, and it is to be observed that mothers themselves often attribute the blindness of their children to this circumstance.

To guard against being misunderstood, it may be as well to state that the remark as to the frequent weakness of intellect of the born blind is not intended to apply to those who lose their sight from improper treatment immediately after birth. These persons, on the contrary, compare very favourably in strength of nerve and general mental power with the most gifted members of the community. It is commonly supposed that the offspring of two blind parents must of necessity be without sight, but this does not by any means follow; for in forty cases in which both father and mother were sightless, out of the number of children born (which was by no means inconsiderable), not one instance of blindness occurred. Some cases have, however, been known in which a blind father or mother have had one or more children totally or partially blind; but close investigation has shown that in these

instances the affliction of the parent has been caused by hereditary nervous disease.

Of course if two blind persons were married, both of whom owed their loss of sight to hereditary nervous disease, the probability of their offspring being blind would almost amount to certainty, but as far as can be traced a case of this kind has never occurred.

Some writers are of opinion that the intermarriage of relatives tends to produce blindness, and a few facts are adduced which seem to sustain this hypothesis, but as there are facts equally strong on the other side, no definite result can be arrived at. Nevertheless, the subject possesses a peculiar interest, and demands close investigation; but we feel that if the theory were correct, nearly all the inhabitants of small villages would be blind, as the people in such cases invariably intermarry very closely.

'Amaurosis,' or 'Gutta Serena,' as it was formerly called, is a disease which deprives persons of sight without producing any apparent defect in the eyes. It is particularly injurious to those past middle life, and is often connected with disease of the brain and the nervous system. It sometimes attacks several members of a family, and usually comes on at the same time of life. Intemperance of all kinds, but especially that of excessive drinking, tends to produce amaurosis, but the most usual cause is that of hard mental and visual work. Milton owed his affliction to amaurosis, and he thus beautifully describes his position in the following lines, addressed to Cyriac Skinner:—

"Cyriac, this three years-
Day these eyes, though clear
To outward view, of blemish or of spot,
Bereft of light, their seeing have forgot.
Nor to their idle orbs doth sight appear
Of sun, or moon, or star, throughout the year,

Or man, or woman. Yet I argue not
Against Heaven's hand or will, nor bate a jot
Of heart or hope: but still bear up and steer
Right onward. What supports me, dost thou ask?
The conscience, friend, to have lost them overplied
In liberty's defence, my noble task,
Of which all Europe rings from side to side.
This thought might lead me through the world's vain masque,
Content, though blind, had I no better guide."

A singular instance of recovery of sight by one who had been long blind from a nervous affection, is afforded by the records of the Jewish Charity of London, which grants pensions to those of their own people who are without sight. The case referred to is that of a woman who had been entirely blind, and in receipt of a pension for about eight years, but during a heavy storm she became suddenly aware, as she expressed it, of "a glimmer of light," which so improved day after day that in a few weeks her sight was perfectly restored. All that can be gathered of her feelings under this, almost miraculous restoration of vision, is, that she was "greatly shocked at the thunder and lightning."

Among the occupations injurious to sight must be reckoned that of the small shopkeeper, who is in business till late at night, and who often sleeps in the shop, or in a small room adjoining. Miners, navvies, sportsmen, and those engaged in powder-mills, and in the army and navy, are often suddenly deprived of sight by the explosion of gunpowder; and a very large number of the sightless owe their misfortune to very simple accidents, such as a blow on the head, a broken leg, an injury to the spine from a fall, being struck on the eye by a stone, or from the effects of vitriol or hot water. It has been sometimes stated by persons of considerable authority that both obesity and smoking are injurious to sight, but there does not appear to be sufficient evidence in either case to support the statement. We, however, think it desirable to insert the following extracts, taken from an article in

the 'Medical Mirror' for October, 1869, and from an American paper:—

"Tobacco smokers must look to their eyes. Proofs are accumulating that blindness, due to slowly progressive atrophy of the optic nerves, induced by smoking, is of frequent occurrence!" In one of the volumes of the London Hospital Reports, Mr. Jonathan Hutchinson has narrated several cases of amaurosis, the histories of which go far to establish the fact that in each case the blindness was brought on by that rapidly-increasing, and, as it appears, baneful habit; and in the 'Medical Times and Gazette,' Sept. 4, the same distinguished surgeon has described another striking case of "tobacco amaurosis, ending in absolute blindness, induced in eighteen months." "The patient, aged fifty, a railway clerk, enjoyed good sight until January, 1867, and excellent general health, with the exception of a single attack of gout. For twenty years he had never been under medical care," and, excepting the optic atrophy, no cerebral symptoms were observable. After leaving off smoking entirely for a whole year, no apparent benefit was experienced. "For ten years before his failure of sight he had been a pledged teetotaller, had never at any time been intemperate, and continued his abstinent habits during the whole period of treatment. He is a remarkably intelligent man; was in former life a great reader, and," says Mr. Hutchinson, "he tells me that since his affliction he has been made acquainted with the particulars of many similar cases." "I have been astonished," he says, "to find that it is not the fast livers that it takes. It is usually the hard-workers and abstemious." He is strongly impressed with the belief that both in his own case, and in that of most others he has seen, smoking was the real cause. "I wish to ask especial attention to the fact that the man was smoking heavily, whilst taking no kind of alcoholic stimulant. I have met with several cases in

which this history was given, and am decidedly of opinion that the injurious influence of tobacco is to some extent counteracted by alcohol."

We can readily assent to Mr. Hutchinson's opinion, which, indeed, does but confirm the proverb, "One evil brings another," for we have long been convinced that great tea and coffee drinkers may persist in their habit the more recklessly, the more freely they indulge in drinking alcohol. Also,

"In some cases the impairment of vision which goes by the name of Amblyopia, precedes its entire loss, from palsy of the optic nerve. Objects are perceived but imperfectly; they appear more or less obscured by cloud or haziness; the letters of a book run into each other, and become confused; the eye is soon tired, and waters, or becomes bloodshot if exertion is continued. M. Viardin has reported three cases of this disease caused by smoking. In the treatment of these cases the quantity of tobacco smoked was reduced, under the direction of M. Viardin, and the sight was restored in the course of a few weeks. He must be a very slave to the use of the weed, who, having once recovered from the poisonous effects, would persist in the habit."

Thousands become blind simply from the effects of old age, and it is curious to find that Thomas Parr, commonly called "Old Parr," was blind during the last twenty years of his life, which extended to 152 years.

The imperfection of vision called "Colour-blindness" is in many cases hereditary, and there are several instances in which almost all the members of a family have been affected in this way. Dr. Wilson states that, with few exceptions, each colour-blind person whom he examined had near relatives as colour-blind as himself. Five had each a brother colour-blind. One had five brothers equally defective, another had his father, brother, sister and nephew in the same predicament.

The Countess of D.'s brother, son and two nephews, were colour-blind, and a Mr. P. had five near relatives equally so. Dr. Wilson is of opinion that one person in every fifty mistakes red for green, brown for green, and purple for blue, and, including all kinds of colour-blindness, he thinks that one in twenty is colour-blind.

In an interesting paper laid before the Society of Industrial Sciences at Lyons, Professor Fournet announced that he had himself "a singular imperfection in the visual organs, known under the name of Daltonism, and which is much more common than is generally supposed. The defect consists in an erroneous perception of colours, and is named after Dr. Dalton, a celebrated English physician, who first discovered the peculiarity in himself, and found that cherries and their leaves had for him the same tint. M. Fournet knew two students of the École des Mines, who, having no clear idea of colours, were unable to distinguish the various minerals; and one of them having to use a carmine wash in some drawing, used Indian ink for the purpose. In a lengthy treatise, Dr. Potton, of Lyons, has ranged in the same category a large number of shopmen who were obliged to be dismissed for the simple reason that they could never distinguish the various shades of the stuffs which they had to sell. As this aberration of sight has been the cause of grave errors on railways, the companies' surgeons at present are most particular in testing on this point the candidates for employment. Dr. Favre, at Perrache, stated that the number of applicants whom he had been obliged to refuse because they were incapable of distinctly telling a green light from a red one, was very considerable."

Before ending this chapter, it may be as well to suggest that whenever any difficulty is found in seeing clearly, no time should be lost in applying to the best ophthalmic surgeon within reach. Under no circumstances should aid be sought from quacks, or

quack medicines. The eye is a most delicate organ, and the greatest care and experience are required in its treatment. It seems extraordinary that so many persons should be found deliberately to disregard the advice of educated men, whose lives are devoted to the science they profess, and to use the nostrums prescribed by persons unacquainted with the first principles of the laws of health, the anatomy of the human body, and the nature and effects of drugs. Very many cases have come under the notice of the writer, in which persons have wasted money, ruined their health, and irrevocably deprived themselves of sight, simply from believing stories told them about cures, specially manufactured to entrap the unwary.

Since the invention of the ophthalmoscope the probability of the cure of blindness has greatly increased, and this circumstance affords an additional reason why not a moment should be lost in arresting disease in the eye on its first appearance.

For a description of the ophthalmoscope, and an account of some remarkable cures, the reader is referred to the Appendix.

Scolberg well says that long, short, or weak sight may in most cases be easily cured by the use of proper glasses; and that the number of the required lens should be accurately fixed by a medical man, and not left to the optician. And here it may be said that for the history of spectacles the reader is referred to the Appendix. It is worthy of remark that Locke, the philosopher, attributed the preservation of his sight to his usually drinking nothing but water; he could read all sorts of books by candle-light until his death, which occurred at the age of 73.

In concluding this part of the work, it cannot be too forcibly urged on the reader that fresh air, wholesome food, moderate work, and a virtuous life are the best means to prevent the loss of sight. It is true that these remarks apply to every ill to which man

is liable, but they are more especially needful to be observed in the preservation of the delicate and valuable organs of sight.

The observations on the preservation of the eyes contained in Mackenzie's volume of 'Five Thousand Receipts,' are so important that we cannot refrain from inserting them here. The writer says,—

"1. Never sit for any length of time in absolute gloom, or exposure to a blaze of light. The reason on which this rule is founded proves the impropriety of going hastily from one extreme to the other, whether of darkness or of light, and shows us that a southern aspect is improper for those whose sight is weak and tender.

"2. Avoid reading small print, and straining the eyes by looking at minute objects.

"3. Do not read in the dusk, nor, if the eyes be disordered, by candle-light.

"4. Do not permit the eyes to dwell on glaring objects, more particularly on first waking in the morning; the sun should not, of course, be suffered to shine in the room at that time, and a moderate quantity of light only should be admitted. For the same reasons, the furniture, walls, and other objects of a bedroom should not be altogether of a white or glaring colour; indeed, those whose eyes are weak would find considerable advantage in having green for the furniture and prevailing colour of their bed-chambers. Nature confirms the propriety of this fact, for the light of the day comes on by slow degrees, and green is the universal colour she presents to our eyes.

"5. Those individuals who are rather long-sighted should accustom themselves to read with less light, and with the book somewhat nearer to the eyes than what they naturally like; while others, that are rather short-sighted, should use themselves to read with the book as far off as possible. By these means, both will improve and strengthen their sight, while a contrary course increases its natural imperfections."

USE OF SPECTACLES.

"From whatever cause the decay of sight arises, an attentive consideration of the following rules will enable any one to judge for himself when his eyesight may be assisted or preserved by the use of proper glasses:—

"1. When we are obliged to remove small objects to a considerable distance from the eye, in order to see them distinctly.

"2. If we find it necessary to get more light than formerly, as, for instance, to place the candle between the eye and the object.

"3. If, on looking at, and attentively considering a near object, it fatigues the eye and becomes confused, or if it appears to have a kind of dimness or mist before it.

"4. When small printed letters are seen to run into each other, and hence, by looking steadfastly on them, appear double or treble.

"5. If the eyes are so fatigued by a little exercise, that we are obliged to shut them from time to time so as to relieve them by looking at different objects.

"When all these circumstances concur, or any of them separately takes place, it will be necessary to seek assistance from glasses, which will ease the eyes, and in some degree check their tendency to become worse; whereas, if they be not assisted in time, the weakness will be considerably increased, and the eyes be impaired by the efforts they are compelled to exert."

ON THE TRAINING OF BLIND CHILDREN.

In treating of education in general, Plato says, "Is not that the best education which gives to the mind and to the body all the force, all the beauty, and all the perfection of which they are capable?"

On undertaking the education of blind children, in addition to the ordinary rules and circumstances which obtain in the training of the sighted, it is useful to bear in mind that the principal object to be sought is, so to develope the senses of hearing, touch, smell, and taste, and so to expand the mind, strengthen the judgment and the general health of the pupil, that the loss of sight may become as small an evil as possible. In carrying out this design it must be remembered that success is as often prevented by parents and guardians doing too much as it is retarded by their doing too little. As the health of the body is dependent to a very great extent on the condition of the mind, and as the mind cannot be kept in health unless it receives sufficient variety of pleasing impressions through the medium of the external senses, it is important that the blind infant be supplied with as much change as possible, especially as the sense of sight, through which the greatest number of impressions are usually made on the brain, is wanting in his case. A cheerful nurse is very desirable to sing to the child, and to introduce little things for its amusement. It may be mentioned, *en passant*, that it is particularly desirable that the blind child should be suckled by its own mother, as it usually requires to be more carefully nourished than other infants. Small musical toys should be provided, which the child should be encouraged to use for himself. He should be taken frequently into the open air, and if practicable, should be allowed to hear the singing of birds, to enjoy the sweet scent of flowers, etc.; he should early be accustomed to hear vocal and instrumental music; should be allowed to feel all kinds of objects, and should be told the names of whatever he heard or felt; he should also be told, as his age increased, the names of whatever he tasted, and of the odours which attracted his attention. Buffon says, "that children should be allowed the free use of their hands from the moment of their birth;" and if this be true with regard to children in general, how much more must it be so

in the case of those without sight, who should be encouraged by every possible means to develope the faculties they possess, in order that they may feel less painfully the want of the sense they have lost. The blind child should be weaned at the usual age, and be allowed to walk alone by the chairs, like other children. It may be remarked, however, that guards should be used to keep him from fires, stairs, and open windows.

The faculty of speech should be early cultivated, and as soon as possible the child should be induced to feed himself with a spoon. The blind infant should not be allowed to sleep more than other children, and opiates of all kinds should be studiously avoided. While the heavy affliction from which the child suffers makes the parents more solicitous over their charge, this solicitude should not degenerate so as to cause them to indulge their offspring to his injury, for an over-kind parent has often proved the greatest enemy the blind person has ever known.

Wholesome correction should not be withheld because the child is without sight, but it should never be administered in anger, and should be rather of a moral than of a physical nature. The punishment should always be proportionate to the offence, that the child may thereby acquire ideas of justice; and it should be borne in mind that indiscriminate kindness is as bad in its effects as unrelenting harshness, and that those parents are most lastingly revered who temper firmness with kindness. When the child is about four years old, it will be well for him to be taught to read by raised letters. The system of tangible print employed may be the common English or Roman alphabet; if, however, proper elementary books for children and the Holy Scriptures are not procurable in Roman type large enough to be easily felt, it will be better to use the alphabet generally known as 'Moon's,' or any other that can be easily obtained, provided it possesses the essential quality of being easily felt. For a descriptive

account of the different systems of tangible typography the reader is referred to another part of this volume. Instances have occurred of blind children of four-and-a-half years being able to read the Bible with fluency, but it is undesirable to seek to imitate such examples, for prodigies are unnatural beings, who die before arriving at maturity, or who only reach it in a state of mental exhaustion which dooms them to premature inanition. What is to be sought is to give to the child a healthy body, active perceptive organs, and a sound mind; and forcing children beyond their years is the surest way to prevent the attainment of these objects.

The importance of a truly religious training cannot be over-estimated, but by the term "religious" we would not be understood to mean "sectarian," neither by the avoidance of the word "sectarian" would we wish to imply that the education should be of a latitudinarian character. The training should be based on the love of God to man, as exhibited in his every-day dealings with His creatures, and as revealed in the Bible. For the blind a sound and healthy religious education is even more important than for the sighted, inasmuch as the privation under which they suffer exposes them to many evils to which those who see are not so liable. We know that it has often been said that the blind are not as amenable to temptation as the sighted, but whoever reflects for a few minutes on the subject will perceive that the special temptation to which the blind are liable is one which pervades their whole lives, and far outweighs any advantage that may appear to exist in their favour. The temptation in question is the following: a blind person, as soon as he begins to think, naturally says to himself, "Why am I made to differ from the mass of mankind?" "Why am I excluded from the inestimable blessing of sight, and thereby made dependent on my fellow-man for the common necessaries of life, and cut off from all the beauties of Nature, and why am I sent

into the world to be mocked by blessings which I know to exist, and for which my soul unceasingly yearns, but from the enjoyment of which I am for ever shut out?" This is but one of a thousand forms that temptation assumes, and it exerts a most baneful influence on every blind person who is without faith in God.

How great then must be the importance of training children, who in after-life will be exposed to so great a danger, to feel that "the Lord is loving unto every man, and that His mercy is over all His works"!

The beneficent Creator of the universe has endowed every organized being with powers suited to the duties required of him, and it must be obvious that the highest crime that can be committed against God is to murmur that He has not made us with different powers to those we possess. No! let us rather develope the capabilities conferred upon us, that we may be enabled to love the Lord our God with all our hearts, all our souls, and all our minds, and our neighbour as ourselves. Let us do this, and let us teach our children to do it, and we shall find that the Author of our being has blended happiness with duty, and that He has placed us on earth to procure as much enjoyment as this world is capable of affording, and also that we may have the opportunity of being prepared for the attainment of perfect bliss in a future state of existence.

When the blind child asks why he differs from other children, let not his question be evaded, but let him be told that God has enabled some persons to tell things with their eyes, and that others cannot do so; that those who can see are called "sighted persons," or people who see, and that those who cannot tell things with their eyes are called "blind persons;" that God, who made both the sighted and the blind, gave to each of them the means of doing that for which He made them, and that if he, the child, use his hands and ears rightly, and if he employ his thoughts pro-

perly, he will by-and-by become a happy and a good man.

The child should be told that there are a great many blind like himself, namely, in the British Isles about thirty thousand, and probably about three millions in the world. He should also be told of the deaf and dumb, of the lame, etc., and that some persons can neither hear, speak, nor see. This information in all probability will lead the child to feel thankful that he is not so badly off as some others; but the subject should not be dwelt on so as to cause melancholy. Social courtesy should not be lost sight of; the child should be early taught to receive visitors in a becoming manner, and to bow or curtsey at the proper time, and especially so as loss of sight prevents the blind observing the custom of well-bred people in this respect. These matters, trivial as they may appear, exert great influence on the well-being of every blind person, as they do much to keep him from being cut off from society, and the sooner good habits are formed, the more easily are they practised. The child should walk alone in the house and the adjacent grounds, and should carry a small stick to enable him to discover his approach to a step or other object. He should not be allowed to form habits of stooping, putting his knuckles to his eyes, playing with his fingers, etc., as these frivolities, besides tending to weaken the mental and physical powers, have great influence in making sighted persons believe that idiocy and blindness are in some way connected. Bad customs, when once acquired, are very difficult to eradicate; and instances are now before the mind of the author in which persons having acquired some of the evil habits above named, have found it impossible ever to get rid of them, although they possess great strength of will in other matters.

A knowledge of how to tell different kinds of money is very useful, and should be early taught.

Gold, silver, and copper coins may be distinguished by the difference of sound when let fall on an uncovered table. All copper or bronze coins have smooth edges, viz. the farthing, the halfpenny, and the penny, and these may be told from each other by the size. All gold and silver coins, with one exception, have rough or milled edges. The exception is the three-penny-piece.

Gold may be known from silver by a difference in size and weight, as well as by the sound. The sovereign on being laid upon a shilling will be found rather smaller, and if weighed in the hand will feel heavier. Perhaps a mistake is most likely to occur in detecting a half-sovereign, as its resemblance to a sixpence is very great, the difference in size and weight being trifling. The milling on the edge of the half-sovereign, however, is finer, and when sounded the difference is at once perceived. Some persons sound money on their teeth, but this is dangerous, as it might lead to a piece of money being swallowed; although the three-penny-piece and the farthing have both smooth edges, the difference in size and sound prevents mistakes.

Bad money may be told either by sound, by yielding when bitten between the teeth, or by being raised with a small magnet; all bad moneys sound differently to good. Counterfeit coins made of soft metals bend when bitten, those composed largely of iron do not bend, but they can be taken up with a magnet. Bank-notes cannot be told without sight, there is some peculiarity in the paper, but not sufficient to be relied on.

When about four or five years old the pupil should commence the study of arithmetic, both mentally and by slate, and it may be observed that a description of 'tangible slates' will be found in another part of this work.

To foster habits of self-reliance, the child should be induced gradually to acquire the power of attending to his own toilet; this is not by any means difficult, and if at the commencement only, the most simple

offices are attempted, it will not be long before assistance of any kind will be unnecessary. Nothing is more lamentable than to see a young man of twenty or thirty years unable to wash his face, dress his hair, or tie his cravat. Truly! kindness which leads to such helplessness is misnamed indeed! and if parents could but realize what evils they inflict on their offspring by doing for them those things which they are well able to do for themselves, they would forego any amount of pleasurable satisfaction, and would be willing even to do things which might appear unkind, rather than add to an affliction which in itself is great enough. To acquire the ready use of the fingers is very important, and for this purpose the child should be shown how to tie knots and bows, and to perform simple employments like netting, knitting, making watch-guards, and doing bead-work. Writing should be commenced when the pupil is about seven or eight years old, and the style adopted should be that which can be read both by the blind and the sighted, a description of which mode will be given in another part of this volume. The study of geography should also be entered upon about this time; and it may be remarked that many advantages spring from Geography and History being studied in connection with each other, and that an account of 'tangible maps' will be found in the division of this work appropriated to that object. The child should be encouraged to associate with sighted children of the same age and station of life as himself, and should be permitted to join in common recreations, such as leap-frog, touch, hoop-bowling, skipping with a rope, shuttlecock, marbles, etc. etc., and even the sports of sliding and snow-balling should not be forbidden, as they greatly tend to strengthen the system, and to give a correct idea of distance. Riding on horseback, when attainable, will be found of great service, and gymnastic exercises are much to be commended. The indoor

amusements of 'la solitaire,' fox and geese, dominoes, draughts, back-gammon, and chess, etc. may be prosecuted with advantage, and cards can be used by those who do not think that familiarity with them may lead to future evil. It may be mentioned that a description of the appliances used by the blind for these games is given at another part of this book. When the state of the weather prevents out-door exercise, dumb-bells may be used with advantage. Perhaps, however, the greatest resource in the way of amusement is to be found in the practice of music. This art should be carried out as far as possible, but it should never be allowed to interfere with the acquisition of general knowledge, and the use of music as a pleasurable relaxation should not be confounded with its cultivation as a profession. Owing to the fondness of the blind for music, it is common for parents when they find their child attached to it, to suppose that he has a special musical talent; this is usually a mistake, and is often productive of great evil. It is natural perhaps for parents to fall into this error, as they have not the opportunity of comparing their children with others suffering from the same privation.

The choice of a profession is a most important subject, but it should not be settled until the child has turned twelve years old. The pianoforte and the concertina are well fitted to be studied for amusement, and the cultivation of vocal music is of the highest importance. Wind instruments are injurious, especially to the young, as their use enfeebles the nervous system. While on the subject of relaxation it may be as well to remark that the most reliable authorities agree, that children should not be allowed to study more than four hours a day. A great deal of useful information, however, may be obtained through the medium of pleasurable amusements.

Blind children should be taken to zoological ex-

hibitions, as a good idea can be formed of the lion, tiger, hyena, etc. from sound, particularly if the keeper feeds them, which he will specially do on receipt of a small gratuity; he will also take care to make the animals roar, laugh, etc. Of the elephant a good notion may be gained by feeling and mounting him.

By handling stuffed lions and other animals that cannot be felt alive, their size and shape may be ascertained; and for this purpose admission to museums should be obtained whenever practicable. Many rare plants may be examined by touch without injury at botanical gardens, and the pleasure derived from the varied perfumes will be an additional source of enjoyment. Some verses entitled, "The blind boy is at play, mother," and other similar poems will be found in the Appendix. The following has been found a very amusing and instructive way of imparting information: Let the blind child examine by touch a sheep, or any other animal or thing. If a sheep, let him be told that when it was young it was called 'a lamb;' that the flesh of sheep is named 'mutton.' Show the child a thread of worsted, a piece of broadcloth, and a piece of coarse paper made from woollen rags; and after having shown him a sheepskin mat, direct attention to leather, a pair of shoes, etc. Show him knife-handles made of bone, also some glue, parchment, and catgut. Explain the nature of the various manufactures connected with these articles, likewise tell him about making size, and to illustrate the use of catgut, let him hear a tune on the violin. These examples will show the pupil how much is produced from one animal, and no judicious preceptor will neglect the opportunity afforded by the above subject to exhort his pupil to observe how good God has been to mankind in providing them with sheep. The lesson might be carried further by referring to the names given to the persons occupied in the various trades connected with the same animal, such as the grazier, shepherd, farmer, butcher, fell-

monger, wool-stapler, spinner, weaver, cloth manufacturer, and the merchant; the tailor, tanner, currier, shoemaker, saddle and harness maker, bone-dealer, the pelterer, glue-maker, parchment and size maker, paper-maker, the stationer, the musician, and the rag-and-bone man of the streets. It may also be pointed out where the best sheep are raised, and in what places the manufactures above named are chiefly carried on. This mode of instruction is calculated to give the pupil such an insight into the utility of knowledge as will be most beneficial to him in after life. Of course the study may be extended to the tools and implements used in the various employments; and it may here be observed that it cannot be too constantly borne in mind that the object of education is to stimulate thought and not to supersede it, which is often done where merely cramming the pupil is all that is sought. And it should never be forgotten that the points to be aimed at in the education of the young are, (1) to induce them to perceive; (2) to think; (3) to speak; (4) to read; (5) to write; (6) to maintain themselves; and (7) to relieve the necessities of their fellow-creatures; all these to be done as God has directed, for Christian principle is the basis of all good. A tolerable idea of form and figure may be obtained from examining by touch models of buildings and ships, also stuffed birds, and statuary. Pictures printed in relief are scarcely of any use to the blind, as the impressions they convey are very erroneous. An instance of the utility of studying sculpture is afforded by the following circumstance:—A gentleman who had lost his sight in infancy visited an exhibition of statuary, by eminent masters, accompanied by some seeing friends. He examined several busts by touch. The first he said was very ugly, when he was astonished on being told that it was an exact representation of an eminent statesman whose name we omit. The second he knew by the abundance of hair on the head and its absence

on the face to be a woman, but the size of the nose and the features surprised him, and he exclaimed, "This is far from being a handsome woman."

"That," said a friend, "is ——" (naming a lady, more remarkable for benevolent works than for personal beauty). The next was the bust of an eminent poet, and our blind friend complained of the smallness of the nose. It now appeared as if nothing would please him, but he felt a fourth figure and cried out, "This is my beauty;" this proved to be the bust of the Lady in Milton's Comus. It may be remarked that during the examination the name of the person represented by the bust was never mentioned until after the blind gentleman had given his opinion, and that in all cases his views were endorsed by his sighted friends.

As a rule, the general health of the blind is less robust than that of other persons; this is often caused by the calamity that produced blindness having occasioned other evils to the system besides that of loss of sight. Frequently also the medical treatment used in endeavouring to recover vision produces permanent injury to the constitution. Perhaps, however, the chief causes of the absence of high health in the blind may be found in restricted physical exertion, and the want of sufficient variety of impressions of the outer world being made on the brain, from which evils all persons must necessarily suffer who are without the sense which possesses the greatest perceptive range. To so great an extent, indeed, do the blind suffer from a deficiency of external impressions, that while with the sighted the principal object of education is to cultivate *the reflective* powers, in the case of the blind the aim should be to develope *the perceptive* faculties. It is not intended on the present occasion to enter minutely into the means best adapted to produce robust health, under the conditions above described, but, it may be remarked that a large

amount of open-air exercise is of the highest importance.

The blind youth should early be encouraged to detect the footfall and other movements, and to tell whether the person approaching him is a man or woman, a boy or girl, and to distinguish, as far as may be, the age of different persons by their firm or faltering steps, etc. Also to know, by the cultivated or awkward tread, the social condition of a person, viz. whether he is a labourer, or a member of the more cultivated classes. In the further pursuit of these studies, the sense of smell will be found a valuable auxiliary to that of hearing, but for further remarks on this sense, we must refer our readers to another page. To dine in public, without attracting the attention of the company, is a most difficult accomplishment for any one without sight, and it is especially so for those who have been blind from infancy. We even find that a lady so well educated as Miss Anna Williams, the blind authoress, and friend of Dr. Johnson, failed in this respect, for Boswell remarks, in his life of Dr. Johnson (fourth edition, vol. iii. page 26), that he (Johnson) "sometimes incommoded many of his friends by carrying her with him to their houses, where, from her manner of eating in consequence of her blindness, she could not but offend the delicacy of persons of nice sensations." In our own day, examples of the same kind are not rare; and it is said, on the best authority, that one who occupies a most exalted station is so much at a loss at table, that he has a servant behind his chair, who puts a long fork under his arm to place the food, so that he may be guided to it. Attention, however, to a few simple rules, with a little perseverance, will soon enable a blind person, of average ability, to dine in public without attracting particular remark.

Our student should sit at table exactly like other persons. When a plate is put before him, he should ascertain, by aid of his knife and fork, the relative

positions of the meat and vegetables; he should then turn the plate, so that the meat may be towards the left-hand; the outer edge of the meat should be felt by the knife and fork, and the fork should be put into the meat about half an inch from the edge, the distance being measured by feeling delicately with the knife, which, at the same time, should keep the meat steady while the fork is entering it. The diner is then enabled to cut the meat close to the fork, and thus to tell the size of the piece before removing it from the plate. To guard against anything being left hanging to the piece which is being taken from the plate, the knife should be passed gently round the piece when it has been raised an inch or two, and if anything is found adhering to it, it should be entirely separated before the piece is taken from the plate. The same observations apply to vegetables, but in general, that kind of food is more easily managed than meat or poultry. Salt, etc., should be put on the left of the plate. Whenever it can be done, only those parts of a joint should be given to the blind person which he really likes; if he cannot take fat, there should be none put on his plate. Fish, and some other kinds of food, are difficult to manage gracefully, but the number of dishes of which our student may partake in public must be left to his own discretion; we think, however, that enough has been said to point out the way in which this matter may be successfully carried out by any one who really means to overcome the difficulties connected with it. The pupil should be taught to move his hands with precision, so as to place them at once, and without hesitation, on whatever article he may require. The importance of this cannot be over-estimated, as it is a matter which affects almost every action of life, and one, moreover, in which the blind are very liable to fall short. "A place for everything, and everything in its place," should be his motto, and care should be taken to foster this habit in youth as much as possible.

The pupil should early be instructed in the method of telling the time by touch on a watch or clock. For this purpose, a card or wooden dial-plate, with movable hands and raised figures, would be found useful; but if this is not at hand, the face of an old clock or watch may be employed. The first thing the student requires to know is the part of the timepiece at which the figure 12 is placed; he should then be told to put the timepiece so that the figure 12 is from him, which would cause the 6 to be nearest to him, the 3 on his right-hand, and the 9 on his left. The figure 1 would be the first to the right of the 12, the 2 to the right of the 3, the 4 to the left of the 3, the 5 to the right of the 6, the 7 to the left of the 6, the 8 to the right of the 9, the 10 to the left of the 9, and the 11 to the left of the 12. The distance these figures are from each other will depend on the circumference of the face of the timepiece employed, but a little practice will soon accustom the pupil to the space occupied by each of the twelve divisions of the circle, and he will soon perceive when the short hand points to a given figure, and will thereby be informed of the hours. He will also, with equal ease, detect the indications of the long hand, by remembering that, when it is at 12, the hour is finished; when at 1 it is 5 minutes past, at 2, 10 minutes, and when at 3 that it is a quarter-past; when at 4, 20 minutes past, at 5, 25 minutes past, at 6, half-past, at 7, 25 minutes to, at 8, 20 minutes to, at 9, a quarter to, at 10, 10 minutes to, and at 11, 5 minutes to the hour. By increased practice, the divisions between the figures will be accurately determined, so that the time may frequently be told even to a minute. Of course, the use of a repeating watch would dispense with the necessity of feeling the hands, but it occupies a great deal of time, and is never preferred by any one who has once adopted the common mode.

The remarks that have been made on education in this work, apply equally to the blind of every class of

society under the age of fourteen, and are only limited in their application by the means possessed of carrying them out. It will now, however, be desirable to make a few observations on matters which affect only some one particular body of persons. As by far the greater number of the blind belong to the poorer classes of society, we shall proceed, in the first place, to make some suggestions on the treatment of blind children whose parents are poor, and we shall then offer a few observations on the training of children belonging to the upper classes.

ON THE BLIND CHILDREN OF THE POOR.

What the feelings of a parent in the humble walks of life must be on finding his child hopelessly blind may more readily be imagined than described. His child for ever helpless, dependent on others for the common necessaries of life, cut off from the enjoyment of every blessing this world can give and for ever dependent on his father and mother who can barely by dint of the most arduous labour procure daily bread; and even when the warmth of parental affection nerves the father and mother to the firm resolve that their poor sightless child shall never want a home while they have hands to work, even then comes the crushing thought of "Oh! when we are dead what will our poor boy do?" "What will become of our poor blind child?" Yes! these are thoughts which must convulse the heart of every parent worthy of the name on finding himself in such a painful position, and when two or more children in the same family are without vision (which is more frequently the case than is generally supposed), how crushing must be the calamity! How overwhelming the situation! But the position, distressing as it is, is not as dark as it appears.

The above reflections, though true, are only so

to a limited extent, for, by the blessing of God on man's efforts, these calamities may be almost entirely averted.

Courage, then, afflicted father! Courage, then, desponding mother! Your heavenly Father has not left you without cause for hope. If your child is not blessed with sight, yet God has given him faculties which may be cultivated so that the evils you dread may be altogether averted. How then, it may naturally be asked, is this to be done? The answer is briefly this:—Do what you can for your child during the years that he is with you at home, and seek the aid of the benevolent institutions that exist for the assistance of the blind.

While the child is at home, the suggestions made in the previous article under the head of "The Training of Blind Children" should be carried out as far as possible, and the blind boy or girl should be made useful in household matters, by being employed in cleaning knives and forks, candlesticks, fire-irons, and other articles of furniture; and here we may insert a remark which may be found useful, viz. that when a blind person stoops to pick up anything, he should not put his head forward, as persons generally do, but should bend his knees as females do in making a curtsey, this will prevent him striking his head against anything that may be in the way.

The child should be allowed to make himself of use by going alone short distances on errands. Every advantage should be taken of parochial day and Sunday schools, as much oral information may be acquired in them, especially if the teachers are kindly disposed and take an interest in their blind pupils. Books in raised letters may be procured from the "British and Foreign Bible Society," London; or from "The Association for Promoting the General Welfare of the Blind," 210, Oxford Street, near Portman Square, W., and 125 and 127, Euston Road, London, N.W.

In some of the larger towns, persons from charitable societies visit the blind at their own homes to teach them to read. It is very important that the child should be encouraged to attend regularly a place of worship. When his friends cannot accompany him, he should be induced to go alone, for nothing is so well calculated to afford comfort under affliction as the revealed will of God; and although, perchance, the heart of the blind child may be light and joyous, yet in riper years he will need all the comfort that Christianity can give to shield him from the assaults of the powers of evil, who will be ever tempting him to repine at the privation which God in infinite wisdom has imposed on him; and it cannot be too often remembered that habits formed in youth are generally permanent, so that he who has been accustomed to do what is good when a boy will in all probability do the same on becoming a man. When all is done that can be accomplished for the blind child of the poorer classes at his home, it will indeed be very little compared with what he requires, and the parents must therefore seek admission for their son or daughter to one of the institutions for the education and employment of the blind, of which establishments there are forty-six in Great Britain and Ireland.

THE EDUCATION OF THE BLIND OF THE UPPER CLASSES.

The question of imparting to the youthful blind of the upper classes an education suited to their condition is a matter of such great importance that it may very well excite surprise that scarcely any attention has hitherto been paid to the subject.

No human being, however favoured by social position, was created to be a useless inhabitant of the world, and he who cares for the happiness of his off-

spring, the good of mankind, or the commandments of God, will not allow secondary considerations to interfere with his duty as the parent of a blind child.

The paths of usefulness open to the blind of the upper classes are neither few nor unimportant; indeed there is scarcely any branch of science that has not been adorned by the labours of the sightless. To prove this statement, reference need only be made to the pages of this work devoted to biography, where it will be seen that the blind have distinguished themselves in the following positions, viz. musicians, teachers of languages and mathematics; lecturers on chemistry, mechanics, and kindred subjects; writers on military science, poets, historians, journalists, solicitors, barristers, magistrates, clergymen, sculptors, and statesmen, etc. etc.

In undertaking to provide for the training of a blind child, the first thing to be desired is to give him an education equal to that obtained by the sighted of his own social grade. To do this in the case before us, the great point to be aimed at is to give him the special instruction he needs as a blind youth, without in any way cutting him off from the collegiate advantages enjoyed by his sighted compeers; to do this, all that is necessary is that a professor connected, say with King's College, London, should make himself acquainted with matters connected with the education of the blind, and should then open his house for the admission of blind pupils, in the same way that gentlemen connected with such colleges undertake the care of other students. If the professor in question also had sighted pupils, so much the better, as competition on fair terms is what the blind require, instead of suppression or absorption. An usher might be kept specially to attend to the blind, in a mixed establishment, should such a course be found desirable. It is obvious from this plan that while the

blind would obtain all that is required for their particular instruction, they nevertheless would possess the incalculable advantage of attending daily at the college and joining with their sighted fellow-students in the classes and lectures connected with university training; they would learn the same lessons and compete for the same prizes and honours, and form those friendships so important to success in life.

Several attempts have been made to establish seminaries of greater or less pretensions for the education of the well-to-do and wealthy blind, but they all possess the radical defect of not connecting the blind with the great educational establishments of the land; and the sooner some enlightened university-professor opens his doors in the way above described, the sooner will an opportunity be afforded to those deprived of sight of the upper classes of obtaining a really liberal education.

For a description of various appliances connected with the special instruction of the blind, our readers are referred to another part of this volume. It may be observed that the foregoing remarks apply solely to the blind of the middle and upper classes, and that it would be unwise for any one to suppose because he is without sight, and feels himself possessed of some talent, that therefore he will meet with consideration and indulgence at the hands of the public. Such ideas are nearly sure to meet with nothing but bitter disappointment. Blindness is such a privation that it needs all the accessories of wealth and station to enable those suffering from it to compete successfully with their equals in the social scale, who enjoy the blessings of sight.

There are paths of usefulness for all, be they poor or wealthy, distinguished or obscure; and he who endeavours to make the best of what God has given him, be it little or much, does all in this respect that is required of him. To be really useful is what should be sought, not to gratify personal vanity and be considered a

prodigy, but simply to do the will of God, and love all men; and it should never be forgotten that it is virtue alone and not dress or titles that can ennoble or adorn the human character. Some very poor youths without sight have reached great eminence, but they have always been assisted by the liberality of the wealthy, who have looked on them as prodigies; but as the time for looking on an intelligent blind youth as a prodigy has long since passed away, he will save himself no end of pain and mortification who keeps his hopes within his sphere, and who aims only at the lofty ambition of doing what is right. But we have digressed, and now return to the subject indicated by the title at the head of this chapter, simply to say, that in the vast arena of usefulness in which the blind of the upper classes are placed, it is required of them by the Giver of all Good that they devote some share of their attention to the condition of those who have the privation of blindness aggravated by the far greater evil of continuous biting poverty.

As the lives of the eminent characters to be found in this volume furnish far greater incentives to exertion, and speak more forcibly on the subject in hand than anything that could be said here, we close these remarks by recommending the careful study of those chapters to the blind and their friends.

THE SENSES.

In considering the nature and effects of Blindness it is of the highest importance duly to bear in mind the constitution and offices of man's corporeal powers. The corporeal senses may be defined as the means whereby we receive impressions from the various objects and things by which we are surrounded.

The physical, or corporeal senses are usually considered

to be the following :—Sight, Hearing, Touch, Smell, and Taste.

It has been well said by Dr. Mackenzie, that the function of the eye is to distinguish colours, and by means of the colours reflected, or emitted by surrounding objects, to enable us to recognize their presence, forms, sizes, positions, distances, and motions. The immediate instrument of visual perception—light, possessing a diversity of colours, and being presented to the eye in different degrees of intensity, produces particular impressions on the nerve of vision. Davies remarks, with great acuteness, that nine things to sight required are, the power to see, the light, the visible thing, being not too small, too thin, too high, too far, clear space and time, the form distinct to being. And the celebrated Dr. Reid observes, that of the faculties called the five senses, sight is, without doubt, the noblest. The rays of light which minister to this sense, and of which without it we could never have had the least conception, are the most wonderful and astonishing part of the inanimate creation. Dr. Wilson says the organ or instrument of hearing is in all its most important parts hidden within the head; that we cannot perceive its construction by a mere external inspection. What in ordinary language we call the ear, is only the outer porch, or entrance vestibule of a curious series of intricate sounding passages, which, like the lobbies of a great building, lead from the outer air into the inner chambers. Certain of these passages are full of air, others are full of liquid, and their membranes are stretched like parchment curtains across the corridors at different places, and can be thrown into vibration, or made to tremble, as the head of a drum, or surface of a tambourine does when struck with a stick or the fingers. Between two of these parchment-like curtains a chain of very small bones extends, which serves to tighten or relax these mem-

branes, and to communicate vibrations to them. In the innermost place of all, rows of fine threads, called nerves, stretch like the strings of a piano, from the last points from which the tremblings or thrillings reach and pass inwards to the brain. If these threads or nerves are destroyed, the power of hearing as infallibly departs, as the power to give out sound is lost by a piano or violin when the strings are broken. The following description is given of hearing by Quincey, viz. :—" Sound is nothing but a certain undulation of the external air, which being gathered by the external air, beats as is supposed upon the *membrana tympana*, which moves the four little bones in the *tympanum*, in like manner as it is beat by the external air. These little bones move the internal air which is in the *tympanum* and *vestibulum*, which internal air makes an impression upon the auditory nerve as the labyrinth and cochlea, according as it is moved by the little bones in the tympanum. So that according to the various reflections of the external air, the internal air makes various impressions upon the auditory nerve, the immediate organ of hearing, and these different impressions represent different sounds." According to Dr. Reid the ear is capable of perceiving four or five hundred vibrations of tone in sound, and probably as many different degrees of strength. By combining these, we have above 20,000 simple sounds, and we may conceive a prodigious variety in the same sound or tone, arising from the irregularity of it. Dr. Henry Lawson writes as follows, on the sense of touch :—" When we bring the ends of our fingers into contact with any object, an impression is immediately produced upon the surface of the skin which is applied to the object, and this impression being conveyed by the sensitive nerves to the spinal cord and brain, an idea concerning the surface of the thing felt is forthwith formed by the mind,—we say we have felt it. It is soft or hard, or smooth, or rough, according to circum-

stances. The power which we thus possess of conceiving of the nature of surface, without the aid of the eye, is called 'the faculty of touch.' The faculty is seated in the skin generally, but particularly in the skin of the fingers. It is not, however, possessed by the skin, but by certain structures in it, which communicate with the terminations of the truly sensitive nerves,—to be plain, it resides in the extremities of those nerves." Dr. Reid also remarks that by 'touch' we perceive not one quality only but many, and these of very different kinds. The chief of them are heat and cold, hardness and softness, roughness and smoothness, figure, solidity, motion and extension; and Dr. Wilson says that, "touch has the largest apparatus of all the senses, for though we are in the habit of speaking of it as localized in the fingers, it reigns throughout the body, and is the token of life in every part. The hand is emphatically the organ of touch, not merely because the tips of the fingers, besides being richly endowed with those nerves which confer sensitiveness upon the skin of the whole body, possess in addition an unusual supply of certain minute auxiliary bodies called '*tactile corpuscles*,' but because the arrangement of the thumb and fingers, and the motions of the wrist, elbow and arm, give the hand a power of accommodating itself spontaneously to surfaces which no other part of the body possesses."

"The organ of smell," remarks Dr. Wilson, "we are apt to regard more as an ornamental than a useful appendage to our faces. So useless, indeed, do a large portion of mankind esteem it to be that they have converted it into a snuff-box; it was given us, however, for a different purpose." Dr. Henry Lawson observes, that "the sense of smell is seated in the nostrils, and there are certain cavities contained in that organ familiarly known as 'the nose.' The nose is a kind of irregularly-shaped box with four openings—two outer

ones above the upper lip, and two inner, placed in the expansion of the gullet, called '*pharynx*.'

"The nose is divided within by a vertical partition into two distinct compartments, and each of these is further divided (partially) by transverse walls of bony tissue, which spring from its sides. The entire surface of these osseous walls is clothed by a soft, velvety, mucous membrane, bountifully supplied with blood-vessels, and having numerous small glands imbedded in its substance. To it are also supplied hosts of filaments of nervous tissue, which stream down from the '*olfactory bulbs*,' and are the organs through which the impressions of odours are conveyed to the cerebrum." And Davies also writes as follows :—

"Next in the nostrils she doth use the smell,
As God the breath of life in them did give:
So makes he now his power in them to dwell,
To judge all airs whereby we breathe and live."

According to Dr. Wilson, "the organ of taste is generally held to be synonymous with the tongue, but in reality the throat and the nostril are as much concerned as the tongue, in the perception of taste. The power of these portions of the body to distinguish savours mainly depends, as in the case with the eye and the ear, upon their connection with the brain, through those fine white cords which have been already referred to as called 'nerves.'" Dr. Reid remarks, "that it is probable that everything that affects the taste is in some degree soluble in the saliva;" and on this subject Davies has the following lines :—

"The body's life with meats and air is fed;
Therefore the soul doth use the tasting power,
In veins which, through the tongue and palate spread,
Distinguish ever relish sweet and sour."

Sight.

The angle of vision taken in by the fixed eye is 110 degrees, and the nearest distance at which a good eye can see clearly is six inches, while under favourable circumstances an expanse of twenty, thirty, forty, or even a hundred miles is brought within its cognizance.

The following observations by Mr. Glaisher, the eminent natural philosopher, contained in a description of one of his remarkable balloon-ascents, from the grounds of the Crystal Palace, Sydenham, are well worthy of deep attention :—

"At the height of three and four miles the view was indeed wonderful,—the plan-like appearance of London and suburbs, the map-like appearance of the country generally, then running the eye down the winding Thames, the white cliffs at Margate and on to Dover. Brighton was seen and the sea beyond. All the coast-line was clear up to Yarmouth. Looking towards Windsor, the Thames was like burnished gold, and the surrounding water like bright silver. Looking towards Putney, the rippling of the water along the banks of the river was distinctly seen. Railway trains were the only moving objects visible, and they looked like some creeping thing (caterpillar-like), and the steam was like a narrow line of serpentine mist. Taking a grand view over the whole visible plain beneath, I was struck with its regularity; the view did not seem natural, it was too even, apparently artificial.

"All the ships looked very diminutive, but were visible beyond the Medway at 5 o'clock. We could plainly distinguish Greenwich Park as a small garden, and the Royal Observatory as a grey speck. The Green Man Hotel, Blackheath, was quite distinct; all the docks were mapped out, and every object

of moderate size was seen clearly with the naked eye."

Surprising as the visual organs are in their natural state, their powers, when aided by science, may truly be said to be miraculous. By aid of the telescope and the microscope, millions of miles of space are brought within the range of the human eye, while, at the same time, it can examine at its pleasure the structure of animals so minute that hundreds may be held on the point of a needle. But this most potent sense, like everything human, has its defects. Of all the physical powers, it is, perhaps, most open to deception. Whoever has witnessed the tricks of a juggler, and seen a pudding made in a hat, an indescribable number of things brought out of a very small parcel, a man swallowing live coals, in short, everything made into nothing, and nothing made into everything, must have felt sadly humiliated to find that his much vaunted sense of sight was not only insufficient to save him from such delusions, but was itself the very means of making him an easy dupe to the deception. Sight has great difficulty in discerning objects that are themselves transparent; and here we may state a fact which forcibly illustrates this remark, and at the same time shows how inferior sight is to touch under some circumstances. A lady with very good sight, well known to the writer, put her hand through a pane of glass, under the belief that she was putting it out of an open window; the glass was unusually clear, as it had been recently cleaned. A very simple experiment will show the reader how easily sight may be imposed upon:—"Take a piece of pasteboard about five inches square, roll it into a tube, with one end just large enough to fit round the eye, and the other end rather smaller. Hold the tube between the thumb and finger of the right hand (do not grasp it with the whole hand), put the larger end against the right eye, and with the left hand hold a book to the side

of the tube. Be sure you keep both eyes open, and there will appear to be a hole through the book, and objects seen as if through the hole instead of through the tube. The right eye sees through the tube, and the left sees the book, and the two appearances are so confounded together that they cannot be separated. The left hand can be held against the tube instead of a book, and the hole will seem to be through the hand." Experiments made to ascertain what colours are most quickly and easily perceived by the eye, seem to show that bright yellow is the colour most readily distinguished, and that colour is therefore suggested for railway signals. Sight perceives the nature of an object at a glance, and afterwards recognizes the details of the parts composing it, but touch, being more restricted in its power, has to feel the parts one by one before deciding on the nature of the object examined; *e. g.*, let a full-sized statue be placed before a sighted man and before a blind man, and the former will immediately recognize it, whereas the latter must proceed to feel the face, the hands, the shoulders, the legs, etc., before he can determine whether it is the complete figure of a man, or whether it is only his head placed on a pedestal, or upon the body of a beast; and this not only holds good in the case of large objects, but it is also true to a greater or less extent with respect to figures of every size and kind.

Sight as a Health-giver.

Sight is not only the principal sense through which information is obtained, it is also a very powerful agent in reinvigorating man after mental and physical exhaustion. Let the student, or the artisan, who has been engaged for a long time in continuous exertion, observe the effect on his feelings, exercised by his looking for a few minutes into a bustling thoroughfare. The

variety of colour, form, position, and incident, unite to exert on his mind a most pleasing sense of reinvigoration. The ordinary observer is not aware of this circumstance, but the more the subject is examined, the stronger will be the conviction that sight is a great promoter of health and happiness; even when the range of vision is confined to a small room, the mind is often cleared, and the imagination steadied, by simply looking round the apartment. The action is so common that persons are not aware of its effect; they glance at objects around them and receive benefit, just as they inspire air to maintain life; and as so little is thought of the latter operation, it is no wonder that the former passes unrecognized. If sight, then, be a great health-giving agent, what must be the effect of its absence? Theory and practice alike show that excessive mental and bodily toil are more injurious to the blind than to the sighted. The question, therefore, naturally arises, can anything be done to lessen this effect? And it may be answered in brief, that, as the health-giving power of sight depends on its ability to communicate pleasurable sensations, its want in the blind may be best supplied by cultivating the means of enjoyment still left to them. These means are hearing reading, music, conversation, feeling a variety of natural and artificial objects, reading by touch, inhaling fresh air and the scent of flowers, and enjoying with a friend a walk sufficiently brisk to expand the physical powers. The company of a friend is essential to the latter enjoyment, as the action of a blind person, when walking alone, is so constrained by his endeavours to keep out of danger, that there is generally in the exercise almost an entire absence of pleasure.

The means of enjoyment above named being much inferior to those obtained through the agency of sight, constant variety is indispensable.

Hearing.

It has been said that the extent of a blind man's observation is confined to the space he can compass with his two arms; this is incorrect. The writer of the paragraph evidently forgot the power of the sense of hearing, which brings the mind into communication with very distant objects, and even possesses certain advantages over the sense of sight, *e. g.*, by the ear objects may be perceived in the thickest darkness, whereas light is essentially necessary to enable the eye to perform its duties; then, again, the intervention of any opaque substance, be it ever so thin, renders sight useless, whereas the ear detects what is passing on the other side of a moderately thick wall. If it were not for man's ingenuity in producing artificial light, sight would be useless to the human race during half the span of existence, but hearing is ever active without the assistance of art.

Mr. Glaisher, in one of his balloon ascents, heard the roar of the London traffic when more than a mile above the city, and the sound of falling rain on trees when one thousand feet above the earth.

The way in which the American Indians make use of their ears on the prairies is too well known to need repetition. The report of large guns may be heard for several miles, and this has often given notice of a fierce fight, when the eye was altogether powerless in the matter.

Aristotle, who was physician to Alexander the Great, invented for his master a trumpet which was capable, it is said, of conveying orders to generals at the distance of one hundred stadia, about twelve miles.

Sound varies slightly in speed according to the density of the atmosphere, being more rapidly transmitted in warm than in frosty weather. The clearest voice to a deaf man is that which is deep and soft; and it has been remarked by a judicious writer that,

"We are hardly aware, until we have lost it, how much we rely on the sense of hearing to protect us from danger. How difficult it is, for example, to cross a London thoroughfare in safety by the aid only of the eyes; how much sound aids us in avoiding a crowd, a falling tile, a shutter rising out of the pavement, etc.!"

A German philosopher has said that while sight is the clearest, hearing is the deepest of the senses. The one is the favourite vehicle and stimulus of emotion, the other of intellect. Certainly music appeals more directly to feeling than painting: the tones of the voice are the truest expression of sentiment and character; the sounds of nature, the wailing and sighing of the wind, the notes of birds, the murmurs of bees affect the feelings more profoundly and mysteriously than colour and form.

The Effects of Darkness and Silence, Blind Animals, etc.

In the cave or grotto of Adelsberg, about thirty miles from Trieste, in Austria, the effect of darkness is shown in the production of a race of worms without eyes, called the *Proteus anguinus;* and the same kind of worm is found in the Mammoth Cave, in Kentucky, America, an account of a visit to which may not be uninteresting. A writer in the 'Chicago Tribune' gives an account of some observations made by Dr. H. Ralls Smith during a visit to the Mammoth Cave for purposes of scientific research. Dr. Smith reports the permanent inhabitants of the cave to be not only blind and deaf, but without eyes, or even the trace of an orbit or an optic nerve, and, it is presumed, without the organ of hearing. So much for the effects of the awful darkness and stillness of the cave upon its regular inhabitants! The effect is of the same kind on its occasional visitor. The following are the words

of the correspondent of the 'Chicago Tribune:'—"Dr. Smith on one occasion penetrated about four miles into the interior of the cave, and, at some four hundred feet below the surface of the earth, remained 'solitary and alone' for a considerable length of time, in the midst of impenetrable darkness, and of a silence agonizing to a degree difficult of conception to those who have not made a similar experiment. The effect upon him, he states, was very distressing, and almost insupportable, resulting in a very perceptible, although temporary, defection of hearing and aberration of mind. The cause of this is, no doubt, to be attributed to the total absence of phenomena, such as vibrations of light, etc. etc., to which we are accustomed so as to render them a necessary stimulus for the proper preservation of the animal economy, as well as for the normal performances of the functions of the senses." The writer adds, "Persons who have been lost in the Mammoth Cave, for one, two, or three days, have always been found, when rescued, in a state of temporary insanity; and when approached by the party or parties sent to their relief, they invariably endeavoured to hide themselves, and thus elude observation." Supposing all this to be true, it suggests the lesson which the writer deduces from the facts, that it is bad for the eyes, or ears, or any other organ to be unused, or but partially subjected to the influence of its peculiar stimulus. It is very remarkable to find that by the exercise of some unknown power the *Proteus* can perceive when a light is near, and tries to avoid it. We believe that there are at present in the Dublin Museum four living specimens of the *Proteus anguinus* from the Mammoth Cave of Kentucky. These specimens somewhat resemble the shape of fish, and are described as being transparent, without colour, and possessing a total absence of visual organs. The natural powers of living beings deteriorate for want of exercise, the idle hand becomes weak, and sometimes it is even seized

with paralysis. The mental powers in like manner decay for want of use. In the Mammoth Cave is a race of blind rats with remarkably large eyes; all the other animals in the cave have no eyes, and this seems to show that the rats came originally from the surface of the earth, and that their progeny lost the power of sight on account of not using their eyes.

The Sense of Touch.

Touch is the only sense which pervades the whole body,—direct contact, however, is necessary for its exercise. The more sensitive parts of the body are the soles of the feet, the palms of the hands, the tips of the fingers, especially the fore-finger, the tip of the tongue, and the lips. Persons having thick skins or corpulent bodies possess the sense of touch to a less degree than those not having such developments. Some writers maintain that the touch of the negro is inferior to that of the white man, but as far as our experience goes we have found the African quite equal in this respect to members of the Circassian race. The soles of the feet are so sensitive that the nature of the ground over which a cultivated blind man walks can be felt through his boots.

The tip of the tongue is employed by many females without sight to press thread through the eye of a needle. The lips are so sensitive that they are often used to verify the perceptions of the fingers, and an anecdote is well authenticated of a West Indian negro girl who having lost the power of reading with her fingers, found, when in the act of kissing her embossed Bible, that she could read with her lips, which practice she afterwards followed. The present writer has tried this experiment with perfect success, but inconvenience of position, and interference with respiration will prevent

lips superseding fingers, notwithstanding that they possess superior sensibility.

It may be observed that although absence of sight gives increased power of touch, and also presents additional motives for its exercise, yet the sense of feeling may be cultivated to a very high degree by sighted persons. An anecdote is related of John Brown, the celebrated American champion of the negro, that when in England, happening to discourse of various qualities of wool, to the amazement of the company he undertook and successfully performed the feat of distinguishing by touch the most intricate differences of quality, he having at the same time a thick bandage over his eyes; and it may be remarked that one branch of the shoe-trade depends so entirely upon touch that it is called by the expressive name of '*blind-stabbing*.' In surgery also, and many of the higher professions, and occupations, a practitioner with delicate touch has a decided advantage over his less fortunate competitors.

Telling colours with the fingers is a fallacy, which has become widely spread through the deception of interested persons. All that touch can do is to distinguish between surfaces; it cannot feel rays of light; and as colour is a combination of rays, and makes no alteration in the surface of an object, touch cannot deal with it. If the colouring matter employed in any operation possesses any tactual peculiarity, such peculiarity can be detected by the fingers, but the colour itself cannot be detected. If any one doubts this, let him colour water in several ways, putting each particular colour into a separate vessel, then challenge the colour-professor to put his hand into the various waters, and name their colours. The remarks on this subject by C. Bell, author of the celebrated work on the 'Hand,' are so apposite that we cannot forbear transcribing them. He says, "When an individual is deprived of the organs of sight, no power of attention,

or continued effort of the will, or exercise of the other senses, can make him enjoy the class of sensations which is lost. The sense of touch may be increased in an exquisite degree; but were it true, as has been asserted, that individuals can discover colours by the touch, it could only be by feeling a change upon the surface of the stuff, and not by any perception of the colour. It has been my painful duty to attend on persons who have pretended blindness, and that they could see with their fingers. But I have ever found that by a deviation from the truth in the first instance, they have been entangled in a tissue of deceit; and have at last been forced into admissions which demonstrated their folly and weak inventions. I have had pity for such patients when they have been the subjects of nervous disorders which have produced extraordinary sensibility in their organs,—such as a power of hearing much beyond our common experience. This acuteness of sensibility having attracted high interest and admiration, has gradually led them to pretend to powers greater than they actually possessed. In such cases it is difficult to distinguish the symptoms of disease from the pretended gifts which are boasted of." (Bridgewater Treatise, page 193.)

Smell.

Smell, though less honoured than the other senses, is nevertheless exceedingly useful, and is productive of a great amount of pleasure, as it is also of considerable pain. It being the true wisdom of the blind to utilize every faculty to the highest degree, the sense of smell is to them of no inconsiderable importance. By its aid they judge of the quality of many articles, to deal with which the other senses are incapable. The habits, occupations, and social standing of an in-

dividual may frequently be detected by the means of this sense, in proof of which the following instance may be named:—

The writer, himself blind, said one morning to a workman, "You have had a red herring for breakfast, you have smoked a pipe of tobacco, and you have just lighted a fire." These three things he smelt in quick succession; and the circumstance is the more remarkable as the man had carefully washed after breakfast and lighting the fire.

On entering a shop he said to the person in attendance, "You have had fish here;" the attendant said they had not, and that he could not smell any. The blind man still insisted that there must have been some in the shop. At length the attendant remembered that a lady had been to pay a bill who lived in a house adjoining a fishmonger's.

Taste.

Considering how much of our enjoyment in this world is derived from the pleasures of the table, it must be owned that great injustice is done to the sense of taste by the thanklessness with which we receive its benefits. If it were not for the services of this sense we should have extreme difficulty in inducing ourselves to partake of sufficient nutriment to sustain life; and when we remember the grateful flavours that the commonest articles have for the taste that is unvitiated by indulgence, we can but admire the beneficence of the Creator, who has made nothing in vain. It can hardly be said that the sense of taste is of any special use to the blind; as, however, their physical enjoyments are comparatively few, their temptations to indulgence in this respect are proportionately increased, and the knowledge of this should induce the blind to guard carefully against the allurements of the palate.

The infirmity above named too often shows itself in the well-to-do by over-indulgence in the pleasures of the table; and in the case of the poor it leads them to frequent the ale-house, and when they have not the means to buy drink, it impels them to beg. The temptations of the palate are strong, and are increased in power by indulgence; and as their gratification not only pleases the organs of taste, but also becomes the means of introducing their possessor into society—thus giving him the pleasure of conversation, which is perhaps valued as the greatest enjoyment by those deprived of sight,—the liability of the blind to fall under the power of this temptation is exceedingly great. Those who see, often judge the blind too harshly in this respect; they think that because any one has lost the principal sense, therefore he should be more correct in his conduct than other persons, but the truth is, that the loss of that sense exposes him to greater temptation, and therefore his acts should be looked on with more leniency. The blind, however, should strenuously guard against the above-named weakness, as it has proved the ruin of many afflicted like themselves, who possessed great talents, and had peculiar opportunities of prospering in the world.

Of course the true Christian needs no such motive, but even *he* will do well to ponder on the matter, and when "he thinketh he standeth, let him take heed lest he fall."

THE INFLUENCE OF THE LOSS OF ONE SENSE ON THOSE WHICH REMAIN.

It has often been remarked that the loss of one sense is made up for by increased power in the remaining senses. This is an adage frequently repeated and popularly believed, but its truth has been more or less denied by those immediately occupied in matters con-

nected with the blind. This circumstance is especially remarkable, as it is evident that a certain amount of nervous power is exerted by every action of the mind or body. This being so, it is clear that a sighted man expends more nervous power through the medium of the eye than he does in connection with the organs of any other sense. When, however, the sense of sight is wanting, the nervous power usually exerted by it is employed by the other senses. So that the powers of perception enjoyed by a blind man in common with his sighted brethren are more acute than they are under ordinary circumstances; but although this fact mitigates, it does not by any means compensate for the loss of sight. The sense of touch cannot be cultivated as highly in a man who can see as in one who is blind, for the simple reason that whereas the nervous power of the former is diffused through five senses, in the latter it is more concentrated, being diffused only through four senses.

A further illustration of this subject may be gained from the following remarks:—

The senses are like five wires radiating from an electric battery, commonly called the brain. These wires, or senses, differ in their capacity for conducting nervous power,—the largest wire, *i. e.* the sense of sight, carrying and applying perhaps more nervous power than the other four wires or senses combined. If the largest wire be disconnected from the battery, the whole power of the battery is thrown into the four wires; and so when sight is wanting, the whole nervous power of the human system is thrown into the remaining four senses, which gives to them an increased power of development.

The senses of hearing, smell, and sight may be properly called the *distant senses*, while touch and taste may be designated the *near senses*. The former class only perceive through the media of air and light, while

the latter come in direct contact with the objects perceived; and here it may be remarked that it seems to be the object of the Creator that the senses should not only each in its respective sphere fulfil the special office for which it is fitted, but that they should also render mutual aid to each other, so that, for instance, the perceptions of the eye may be corrected by the touch and the other senses.

THE UNRECOGNIZED SENSES.

Besides the universally acknowledged five senses, it is evident that man possesses certain powers which are neither classified among the senses nor the faculties; such a power, for instance, is that which enables him to perceive the quality of weight. This fact is indeed acknowledged to some extent by many physiologists, who admit the existence of a sixth sense, which they call '*the muscular sense*,' or the *sense of weight*, but the admission of the existence of this sense does not account for the presence of phenomena which can only be explained, as we think, by admitting the existence of as many senses as there are independent powers of perception in man; and this being so, seven or eight senses must be acknowledged, and we shall therefore now lay before the reader some facts bearing on this subject.

Whether within a house or in the open air, whether walking or standing still, I can tell, although quite blind, when I am opposite an object, and can perceive whether it be tall or short, slender or bulky. I can also detect whether it be a solitary object or a continuous fence, whether it be a close fence or composed of open rails, and often whether it be a wooden fence, a brick or stone wall, or a quickset hedge. I cannot usually perceive objects if much lower than my shoulder, but sometimes very low

objects can be detected. This may depend on the nature of the objects, or on some abnormal state of the atmosphere. The currents of air can have nothing to do with this power, as the state of the wind does not directly affect it; the sense of hearing has nothing to do with it, as when snow lies thickly on the ground objects are more distinct, although the footfall cannot be heard. I seem to perceive objects through the skin of my face, and to have the impressions immediately transmitted to the brain. The only part of my body possessing this power is my face; this I have ascertained by suitable experiments. Stopping my ears does not interfere with it, but covering my face with a thick veil destroys it altogether. None of the five senses have anything to do with the existence of this power, and the circumstances above named induce me to call this unrecognized sense by the name of "*Facial Perception.*"

Dr. Saunderson could tell when a cloud obscured the horizon. At one time I could do this with great accuracy, but cannot now trust myself in this respect. Whether long residence in London, where clouds may be said to be "the rule," may account for this, I cannot say. I have known several persons totally blind possessing this power; Mr. Farrow among others.

The presence of fog interferes greatly with "facial perception," the impressions of objects are faint and untrustworthy. I believe experiments will show that the drier the atmosphere, the more perfect the exercise of this sense, and what relation electricity may bear to it is yet to be ascertained. I have a strong conviction that eventually it will be demonstrated beyond doubt that various substances, such as iron, wood, stone, etc. convey different impressions to the face, but a more minute examination of the subject is required. Although, as above stated, fog is an impediment, ordinary darkness is no inconvenience; anything, however, which attracts the other senses, such as noise, partially occu-

pies the attention of the mind, and so interferes with the impressions received through "facial perception." What influence the cause of blindness may have on this subject I cannot say, but probably very little, for in my case the sight of one eye was lost soon after birth, and the other by an accident, and Saunderson became blind in infancy. With those, however, who lose their sight from nervous disease, the case may be different, as doubtless with them the whole system suffers from the same disease that produced blindness.

When passing along a street I can distinguish shops from private houses, and even point out the doors and windows, etc. and this whether the doors be shut or open. When a window consists of one entire sheet of glass, it is more difficult to discover than one composed of a number of small panes. From this it would appear that glass is a bad conductor of sensation, or at any rate of the sensation specially connected with this sense. When objects below the face are perceived, the sensation seems to come in an oblique line from the object to the upper part of the face. While walking with a friend in Forest Lane, Stratford, I said, pointing to a fence which separated the road from a field, "Those rails are not quite as high as my shoulder." He looked at them and said they were higher. We, however, measured and found them about three inches lower than my shoulder. At the time of making this observation I was about four feet from the rails. Certainly in this instance facial perception was more accurate than sight. When the lower part of a fence is brickwork, and the upper part rails, the fact can be detected, and the line where the two meet easily perceived. Irregularities in height and projections, and indentations in walls, can also be discovered. The utility of this sense to the blind who walk alone is too obvious to need comment, and we shall therefore content ourselves with having merely alluded to the subject.

That persons in general possess the sense of facial

perception there appears no good reason to doubt, but in the case of the sighted its existence is unrecognized, on account of the all-absorbing claims of the eye, and from its existence being of a more secret and subtle nature than that of the other senses. That mankind, however, derive some benefit from it, of which they themselves are ignorant, it is impossible to doubt. He who considers the pleasurable emotions imparted to man from having an exhilarating breeze play upon his face, can never doubt that there is some connection between the emotion and the existence of the sense above described.

As bearing on this subject, it may not be out of place to mention a remarkable circumstance connected with the insectivorous bats. The eyes of this species of quadrupeds are particularly small, hence the saying, "blind as a bat." The defect of vision is, however, fully compensated by a wonderful power of perception, analogous to that faculty in man which has been called in these pages Facial Perception.

Spallanzani extracted the eyes of bats and covered the empty sockets with leather. Yet in this condition they flew round his room, avoiding the sides, never striking against anything, and flying out of the door without touching the door-case. In flying through a sewer which made a right angle, they turned at the proper point, though at a distance of two feet from the walls; they found their resting-place on a cornice, and flew through threads suspended from the ceiling without touching them, though scarcely further apart than would admit their extended wings; and they avoided all obstacles with equal facility when the whole head was covered with varnish. In the English translation of Blumenbach it is stated that bats possess the power of avoiding any obstacles, even though the ears, eyes, and nose be closed. Hence some naturalists have ascribed a sixth sense to these animals. Some consider this sense as analogous to "touch," but it is hard to

see why. For "touch" perceives by *contact*, but it is the essential peculiarity of this sense that it perceives *without contact*. Saying that it resembles "touch" seems like affirming that it resembles it, because it is in every way its opposite. All that is above stated as having been done by bats can be done by a highly-cultivated blind man,—walking, of course, taking the place of flying.

ON THE BLIND WALKING ALONE, AND OF GUIDES.

"The blind man who governs his steps by feeling, in defect of eyes, receives advertisement of things through a staff."—DIGBY.

The above graphic lines show that the phenomenon of the blind walking alone in the streets was by no means uncommon 250 years ago, but the antiquity of this practice is far greater than the time of Digby, for we find in Holy Writ, that as early as the propagation of the Levitical law, the self-reliance of the blind in walking abroad without a guide was recognized and protected by the special command of Jehovah himself; thus we have in Leviticus xix. 14, "Thou shalt not curse the deaf, nor put a stumbling-block before the blind, but shalt fear thy God. I am the Lord." (Deuteronomy xvii. 18), "Cursed be he that maketh the blind to wander out of his way, and all the people shall say Amen." These passages forcibly show the special care of God, and are a striking rebuke to those shallow philanthropists who wish to prevent the blind walking alone, and thereby to deprive them of personal freedom, and so to aggravate the affliction of loss of sight.

It is not only in the sacred Scriptures that records are found of the independence shown by the blind of antiquity, for in the Greek mythology the sub-

ject is referred to in a most remarkable way. The ancients were so much struck with the circumstance of the blind walking alone, aided only by a stick, that, in their usual way, they made it a miraculous gift of the gods, and handed it down as an article of faith, that when the ancient prophet Teresias was deprived of sight for an offence against the gods, he was compassionated by the goddess Chariclo, who in pity for his misfortune gave him a staff, by which he could conduct his steps with as much safety as if he had the use of his eyesight. The importance to every blind man of acquiring the power of walking in the streets without a guide can scarcely be exaggerated. Loss of sight is in itself a great privation, and when to it is added the want of power of locomotion, the sufferer more nearly approaches the condition of a vegetable than that of a member of the human family. Of course he who possesses the ability of walking alone is not obliged always to practise it. If circumstances enable him to accomplish more by having a guide, it is desirable for him to do so; but even in this case the knowledge that he is not utterly dependent on a guide, and that if he were to be left alone at any moment he would be master of his own actions, and be enabled to direct his steps through the world, gives to him such confidence and comforting self-reliance which no other possession could afford. With the mass of those who are blind, however, there is little choice; they must either walk alone or sit still; and as health of body, tranquillity and vigour of mind, and the attainment of the means of subsistence largely depend upon the power of moving at will, it is felt desirable to offer a few hints to facilitate the acquisition of such an important object. One of the greatest aids to him who would walk by himself is a stick; this should be light and not elastic, in order that correct impressions may be transmitted from the objects with which it comes in contact to the hand of the user. The handle should

be somewhat like a hook, and sufficiently large to be grasped firmly, so that it may not easily be knocked out of the hand; of course the stick should be suited to the height of the individual, but it should be rather longer than what would be used by an ordinary person of equal stature, and it should always have a good ferrule, that the length may not vary; the stick should usually be held in the right hand and placed horizontally about six inches in front of the person in an oblique position from the right hand to the ground. The hand should grasp the hook so as to be covered by the stick, and thus be shielded from injury when coming in contact with a post, or other similar object. When stepping, the stick should be waved alternately from right to left to correspond with the movements of the feet; thus when the right foot moves, the stick should feel on the right side, when the left advances it should touch the left side; and as the stick should always be held about six or nine inches from the feet, the ground will always be examined before being actually trodden. When danger from coming in contact with an object is apprehended, the regular motion of the stick from right to left should cease, and it should be instantly placed before the person in an oblique position, as above named, and should only touch the ground on the right and left sides at comparatively distant periods, it being borne in mind that the use of the stick is not only to discover the nature of the ground, but also to defend the walker from objects at rest. The left arm should be placed horizontally close against the chest, so as to be immediately advanced on the apprehension of danger. The pedestrian should keep in the middle of the pavement, so as to avoid alike the posts on the kerb, and the projections from the houses. His posture should be perfectly erect, that his face may not be injured by coming in contact with various objects. As little noise as possible should be made with the

stick, and all the motions and actions of the walker should correspond, as far as practicable, to those of the sighted man, for the less notice that is attracted by the blind in the streets the better for their comfort. On coming to a step, its depth or height should be gauged with the stick, and this operation should be rigidly carried out, as the life of the individual may depend on the result. Comparatively quiet streets may be crossed without a guide, but those with considerable traffic should never be attempted. Just touching a first passer-by, and asking him to lead you across is much better than risking your neck or shattering your nervous system; and what if some churlish man refuse? such an one is his own tormentor, and may well excite our pity instead of provoking anger. But in general it will be found that ninety-nine persons out of a hundred will be delighted on the slightest solicitation to be for one moment eyes to the blind. On crossing a street without help all the faculties should be called in play to ascertain if danger exists. Before starting, the stick should gently sweep the ground in front, and no running should be attempted, the pace should even be slower than on other occasions. The greater the probability of danger, the more caution and self-possession are required. When steps, or other similar hindrances, are anticipated, the stick should be advanced to its full length, so as to perceive, at the earliest possible moment, the circumstances of the position. If the path be found strewn with loose earth, etc. it is a sign that caution is necessary, and the nature of the materials covering the ground will often indicate the kind of danger to be expected; the determination of this point is very much aided by the muscular sense as exercised through the feet, and for this reason thick shoes are objectionable. It may be mentioned that a light umbrella may be found useful. When not employed to keep off rain, it should be carried by the middle in the left hand, in which position it will be of occasional

service in detecting objects on that side. The sense of hearing, it may readily be imagined, is a very great assistance, especially in recognizing the approach of persons and things. By its means the precise distance of vehicles may be ascertained, and it also detects the number and kind of foot-passengers that are near. To enter into a lengthy description of the services rendered by the auditory nerve to the blind who walk alone would be superfluous, as knowledge of this kind can only be obtained by experience, and all that is now attempted is to point out the course that should be pursued; and we do so in the full persuasion that the more such a mode is practised, the greater will be the knowledge and enjoyment of those who undertake the task.

It may, however, be remarked that when the clink of a chain is heard on the pavement, it may be inferred that barrels are being lowered into a cellar, in which case he who would avoid danger had better call out, and ask if "he can pass?" and the same should be done on hearing the sound of falling coals, or of any similar things on the pathway. The sense of smell is also of great importance to the blind pedestrian. He may be aided much by noticing the particular odours connected with different places, *e. g.*, the scent of paint shows that a house has been newly painted, and therefore is to be avoided, unless he would spoil his clothes. The smell of beer, or of a damp, ill-ventilated place, shows that a public-house or other cellar is open; the scent of tarred sacks indicates that the iron over a cellar has been removed that coals may be delivered. The following shops may also be found by smell:—Grocers, butchers, bakers, oilmen, drapers, stationers, shoemakers, chemists, etc. By cultivation very minute differences may be perceived, such as telling a haberdasher's from a draper's. Scent will also enable a person to detect the approach of a sweep, or of a man carrying a bag of flour, and thus be the means of

enabling him to avoid the effects of contact with them. The unrecognized sense, which we call "Facial Perception" often enables a person to recognize by sensation the nature and position of posts, the existence of private houses, shops, and blank walls, etc., and for further remarks on this subject the reader is particularly referred to the pages on the Unrecognized Senses, and to the portion of this work which treats of the five ordinary senses. With regard to the distance that may be travelled without sight, persons have been known to walk from Manchester to London, and some to traverse every part of the kingdom, as beggars, and strolling players. When in Paris, a few years ago, we greatly surprised the blind with whom we came in contact by describing the way in which their English compeers traversed the streets of London, as walking without a guide seems quite unpractised by the French blind.

We cannot quit this subject without inserting an account of a village carrier, whose conduct forcibly illustrates the matter in hand:—

"A stranger passing through Godalming on any day save Sunday at about noon, could not fail to be struck with the appearance of a cheery-looking old man, with a number of parcels and bundles hung about him in all sorts of impossible ways, and a small twisted brass horn slung from his neck. On closer inspection, he would perceive that this little hale old man, posting along at a rapid rate with a stout stick in his hand, but making no uncommon use of it, is blind, although an extraordinary intelligence lightens up the features and takes away that painful and melancholy look which often accompanies blindness in those who are the subjects of that greatest of privations. That is old George Marden, who for upwards of twenty years has acted as carrier between Humbledon and Godalming. During the whole of that period he has been totally blind. He is now considerably over

seventy years of age, and yet he daily trudges between these places, which are four miles apart, calling wherever he is required, and discharging the responsible duties of his vocation with unerring accuracy. The road which he traverses is exceedingly intricate, being chiefly paths across commons, and otherwise involved, and he often has to make divergences for the residences of persons living off the main track. But old George never stumbles. A blast from his little horn makes known his approach, and whether at the cottage of the humble, or the mansion of the rich, there are few more welcome visitants, for he is a great importer of news and gossip, and never arrives empty-handed. During the severe snow-storms of last winter, when the paths which he traversed were completely obliterated, and it would have puzzled the keenest-sighted individual to have made the journey, George Marden never missed a day, and it is believed never wandered out of his road an inch. Indeed, the old fellow's other perceptive faculties are wonderfully acute, and the inhabitants of Godalming declare that he knows every one of them as he passes, even though they do not speak—a belief which gains strength from the fact that he salutes them by name and never errs. It is said that he makes fewer mistakes than any other carrier in or out of the town, and there is no one who is more implicitly relied on for the performance of those numerous little commissions so often entrusted by the denizens of a village to the carrier to the nearest town. Old George enjoys excellent health, and is reported never to have missed a day since, nearly a quarter of a century ago, he first entered on his career as a carrier." ('West Surrey Times,' May 4th, 1867.)

The treatment of this branch of the subject would be far from complete were a passing mention not to be made of guides. When the cost of such an assistant can be met, and it is deemed advisable for any

one to avail himself of such service, the greater amount of intelligence possessed by the person engaged, the better will he be enabled to discharge his ordinary duties, and also to report acurately to his employer the nature of various circumstances that meet his view; but above all things, a father who is without sight should shrink from depriving his children of any advantages to make use of them as guides. He should remember that his children, although they are his offspring, have natural rights, and that by keeping his sons and daughters in a state of ignorance, and drudgery, he is reducing them to a condition far worse than blindness. It is too much to be feared that many parents have a great deal to answer for in this way, and the writer would earnestly impress upon them so to act, that in future years their children may speak of their blind father with thankfulness and pride, rather than with contempt and derision. Not the least remarkable among the guides of the blind is the faithful dog; the breed of the dog usually employed in this way is not much, and the appearance of the animal is far from striking, but his intelligence and fidelity are beyond description. To lead his master through the most crowded thoroughfares unhurt, to turn to the right or left when bidden, to cross roads only when quite safe for his feeble and helpless master to do so, to stand for hours with a cup or hat in his mouth, pitifully begging for pence, and to refuse to quit his charge for the choicest bone even when pining with hunger, are but a few of the virtues of this most instructive quadruped. And it may be noted that creatures with these qualities are common to every clime, and that persons afflicted with loss of sight, even when combined with deafness, are safe when under the protection of the faithful dog Tray; a little dog brought from the Crimea safely guided his master, who was both blind and deaf, for many months through the most intricate parts of Kent. But the dog has his rival, albeit

a very humble one, among the goose tribe, and although it seems scarcely credible yet it is stated that:

"In a village in Germany, a blind old woman was led to church every Sunday by a gander, who used to take hold of her gown with his bill. When he had safely conducted the poor woman to her seat, he would go back to the churchyard and graze there until the service was over. When he saw the people coming out of church, he went back to his blind mistress and led her safely home. One day a gentleman called at the woman's house, and when he found her out, he expressed his surprise to the girl who opened the door. "Oh, Sir," she answered, "we are not afraid of trusting her out, for the gander is with her."

In an early part of this article allusion was made to the injury caused to health by the want of power of independent motion. This result must be so evident, that scarcely any observations upon it are required. It is, however, felt desirable to record here the fact that Dr. Blacklock, the eminent blind philosopher, divine, and poet, ascribed much of the physical weakness and timidity of nature from which he suffered to his not being allowed when young to walk abroad without a guide. And in the article "Blind," written by him in the 'Encyclopædia Britannica,' he makes use of the following words when speaking of the blind child:—"It is better that he should lose a little blood, or even break a bone than be perpetually confined in the same place, debilitated in his frame and depressed in his mind." Let not any one, however, be alarmed by these words of the learned doctor, for loss of blood and broken bones do not necessarily follow from the blind walking alone; in fact, it is believed that fewer accidents happen to the blind than to the sighted, in proportion to their numbers; and here the writer can speak from individual experience, and also from the knowledge he has

of the cases of hundreds of persons in the same situation.

PRINTING FOR THE BLIND.

The invention of the method of printing in relief is one of the most valuable discoveries ever made; and although all the beneficial results anticipated by its early promoters have not followed its introduction, yet real and substantial advantages have accrued to the blind by its instrumentality. All writers on this subject for the last eighty years have accorded the credit of this invention to Valentine Haüy, a writing-master of Paris, brother of the celebrated mineralogist, and son of a poor weaver, of the town of St. Just, in the present department of Oise. Indeed, Haüy himself claimed to be the discoverer; and respect for his labours, and for the character of many of those who have confirmed his theory, causes regret that justice should oblige us to state that Haüy was not the inventor. This step we certainly should not take unless we had the warrant of the most undoubted evidence, and the proof we now proceed to lay before the reader. About twenty-two years before Haüy is said to have brought out his invention, an account appeared in the Annual Register for 1762 of the life and accomplishments of Mademoiselle de Salignac, a blind lady, in which occurs the following passage: "The most wonderful circumstance is that she should have learnt to read and write, but even this is readily believed on knowing her method. In writing to her, no ink is used, but the letters are pricked down on the paper, and by the delicacy of her touch, feeling each letter, she follows them successively, and reads every word with her finger ends." M. Diderot, the celebrated French encyclopædist, says, "She could read a book printed only on one side; Priault printed some in

this manner for her use." Although obliged to refuse to Haüy the honour of having invented 'tangible print,' we, nevertheless, owe him a deep debt of gratitude for having established the first school for the instruction of the blind, and also for having succeeded in directing the attention of the various European States to the mode of educating those deprived of sight. Haüy having formed the acquaintance of the Baroness Von Paradis, of Vienna, who visited Paris in 1780, and performed publicly on the organ and pianoforte with great applause, he repeatedly visited that talented lady, and was much surprised to find in her apartments several contrivances for the use of the blind, among which a small printing apparatus particularly attracted his notice. The invention of this appliance has been severally ascribed to a blind gentleman, named Weissemborg, of Mannheim, in Bavaria, the inventor of maps, etc. for the use of the blind, and to Von Kempelen, of Vienna, the inventor of the mechanical chess player and of the speaking automaton, but of the origin and mode of working this printing apparatus we have no reliable information. We, however, know that Madame Von Paradis was enabled to correspond by its means, both with Herr Von Kempelin and with Herr Weissemborg, and we may therefore gather that it could be used by a blind lady, and that its productions could be read both by the sighted and by the blind. Haüy compared the high cultivation of Mademoiselle Von Paradis and Herr Weissemborg with the degraded state of the masses of the blind in France, a striking instance of which was afforded by the part they took at the annual fair of St. Ovid. At this fair an inn-keeper had ten blind men attired in a ridiculous manner, and decorated with asses' ears, peacocks' tails, and spectacles without glasses, in which condition they performed a burlesque concert, the profits doubtless being divided between the blind men and the inn-keeper. Haüy after much reflection, opened in 1784 an institution for

the instruction of the blind in reading, writing, arithmetic, geography, music, and various mechanical employments. The institution was at first entirely supported by voluntary contributions, and by the aid afforded by the Philanthropic Society of Paris, which supplied funds for the maintenance and instruction of twelve persons. Some say that Haüy took his idea of printing in relief from seeing a sheet of ordinary black print that had by chance been very much pressed, so that the letters were raised on the back of the paper. But, however this may be, in 1784 books were embossed by him, and on December 26th, 1786, he examined before the amiable and unfortunate Louis XVI. twenty-four pupils in reading, writing, music, geography, and arithmetic, and in the same year he published an account of his contrivances, entitled, 'Essai sur l'Education des Aveugles.'

As the novelty of the subject wore away, voluntary contributions almost came to an end, and the blind-school must have ceased to exist, had it not been taken, in 1791, under the protection of the State. This patronage, however, although it secured the establishment from extinction, greatly impaired its efficiency. The training of the blind and of the deaf and dumb was now under one roof, but the evils of this arrangement became so patent, that a separation took place in 1795. Six years after this occurrence, the school was united to the hospital of the Quinze-vingts, but the mixing of young blind persons with old soldiers, whose only common link with them was want of sight, was found to be so prejudicial, that Haüy, full of indignation, resigned his position as director of the institution, and went to St. Petersburg in 1804, to which city he had been invited by the Emperor Paul, to establish an institution. In the same year, he succeeded in forming a similar establishment in Berlin, but the unsettled state of affairs in the north of Europe caused him to return to Paris in

1808, where he lived with his brother the Abbé. While in Russia, he received the decoration of the Order of St. Wladimer as an acknowledgment of his services. After the restoration of the Bourbons, Haüy succeeded in obtaining an annuity of 2000 francs, but his enjoyment of this pittance lasted but a few years, as he died in 1822, at the age of 76. Many accuse Haüy of having had more zeal than discretion, but such depreciators should know that the era of the great French Revolution was not the most favourable for the development of an art, the object of which was to improve the condition of a class of persons who exert scarcely any influence in the political arena; and here it must be observed that the way in which Haüy was treated by Dr. Gullié, who became Director of the Institution of Paris, in 1815, cannot be too strongly deprecated. In Gullié's book, published 1820, entitled, 'Essai sur l'Instruction des Aveugles, ou Exposé Analytique des Procédés employés pour les instruire,' Haüy was almost entirely ignored, which indignity was more poignant as he was then alive, and suffering from depressed circumstances, brought on by devotion to the cause of the blind.

Some accounts state that Haüy received a pension of 2000 francs from the Government of Napoleon, in 1802, as compensation for his loss of office, and that he stayed eleven years in Russia, not returning to France until 1817. But, on the whole, the account given above seems most consistent.

It is gratifying to be able to record that an attempt to repair the injustice done to the merits of Haüy was made by the French Government, in 1861, by the erection of a marble bust to his memory, in one of the courts of the Institution for the Blind, at Paris. On August 10 of that year, a festival was held to inaugurate the statue of Haüy, at which several laudatory speeches were delivered. One of those who took part in this festival was M. Rodenbach, the celebrated blind member of the Belgian Chamber of Deputies. He had been

a pupil of Haüy's, and his speech on this occasion produced the most lively emotion. There is also now existing in the chapel of the institution a tablet bearing an inscription which states that Haüy was born at St. Just, Picardy, 1744, and died in Paris in 1822.

We think it may be said with confidence that the blind have scarcely had a better friend than Valentine Haüy. The characters that Haüy employed in his system of relief-print were very similar to the ordinary Roman or English letters, they were somewhat modified by Guillié, but have been entirely superseded in France by the introduction of the arbitrary system of M. Braille, for which see another part of this work.

It is not a little singular that reading for the blind had been introduced into France forty-three years, and into Prussia and Russia twenty-three years, before the art was used in England, and the strangeness is further increased by the circumstance that the action of the French in teaching mechanical arts to the blind was imitated in Liverpool seven years after it was adopted in Paris.

A translation of a portion of M. Haüy's work was made by Dr. Blacklock, the blind poet, and published in the third edition of his works; and M. Guillié's book was translated and published in London by Sir R. Phillips, in 1819. But an English book printed in relief, for the use of the blind, did not appear until 1827. The credit of this achievement is entirely due to James Gall, of Edinburgh.

And here it may be of interest, if we transcribe an extract from the minutes of the Edinburgh Blind Asylum, which bears on this subject:—

"EDINBURGH, *October 26th*, 1827.

"At a meeting of the managers of the Blind Asylum Edinburgh, of this date:

"The meeting proceeded to examine the nature and efficiency of the books lately printed for the use of the

blind. Some of the boys belonging to the asylum were introduced, who, though the books had been in their possession only a few weeks, and although they had got no regular teaching, were able readily to distinguish all the letters, and easily discriminated those which were likest to each other. They were then, by Dr. Gordon and other of the directors, made to touch isolated words, in different pages of the book, which they at once knew; and they afterwards read, slowly but correctly, in different parts. By repeated trials, and by varying the exercises, the directors were of opinion that the art promised to be of the greatest practical utility to the blind, who, it evidently appeared, would be able to use these books with increasing facility.

"Mr. Gall also stated that the apparatus for writing to and by the blind, were in a state of considerable forwardness. The principles had been completely settled, and found efficient, and all that remained were only minor points of economy, for procuring for the blind, at a low rate, the necessary requisites. Some of these he exhibited to the meeting. The letters were easily formed on common post letter paper, by one motion of the hand; and being submitted, one after another, were correctly and invariably distinguished by the blind boys present.

"The Directors cordially approved of what had been done, the expenses of which had hitherto cost nothing to the public; and while they proffered their own patronage, they at the same time earnestly recommended Mr. Gall's efforts to the encouragement of the public, without which, from the fewness of the reading blind, it was evident he could not proceed."

In 1828, a committee was formed by the Rev. Dr. Baird, the principal of the University of Edinburgh, to examine and report upon the methods of reading, writing, etc. introduced by Mr. Gall. Dr. Baird himself was a member of this committee, and with him were associated Sir Henry Jardine, Professor Pillans,

Professor Wilson, and Robert Johnston, secretary of the Blind Asylum of Edinburgh. The proceedings were held in the Hall of the University, and the report of the committee expressed the strongest approval of Mr. Gall's past labours and future plans. A report was also issued, in the same year, by a committee, formed at the instance of a public meeting held at Glasgow, which entirely endorsed the opinions expressed in the documents drawn up at the Edinburgh University and Blind Asylum. The Glasgow Committee met at the Blind Asylum, and was presided over by the Very Reverend D. M'Farlane, Principal of the College of Glasgow, and it must not pass without notice that, among the signatures to the report, is found the name of John Alston. The introduction of the art into London was in 1829, when Mr. Gall visited the metropolis, and exhibited the acquirements of a pupil at a meeting of the members of the Sunday School Union, held at the Poultry Chapel, the Rev. John Clayton being in the chair. On revisiting London, in 1831, Mr. Gall succeeded in teaching several inmates of the School for the Indigent Blind, St. George's Fields, Southwark, to read and write. For which service, the Committee of that Corporation voted him a benefaction of fifty guineas. Mr. Gall, however, generously refusing to accept the gift, the committee elected him a Life Governor of the Institution, and decided that a suitable present should be tendered to Mrs. Gall. On returning to Edinburgh, our philanthropist, in January, 1832, finished the Gospel of St. John, which, it is believed, was the first book of the Scriptures printed for the use of the blind. Its price was one guinea per copy, and the number of subscribers procured during the six years it was being prepared for publication, only amounted to 156. There was, however, in Edinburgh, an assisting fund for selling the books to the poor at half price, but its receipts during the period only reached £176. The Gospel of

St. John, although finished in 1832, was not published until 1834, and its price subsequently became six shillings. In 1834, Mr. Gall published, in common print, for the use of the sighted, "A Historical Sketch of the Origin and Progress of Literature for the Blind, and Practical Hints and Recommendations as to their Education.' This work enters somewhat minutely into the circumstances connected with the protracted experiments preceding the introduction of his system of tangible print, and the little effect produced by it on the public may perhaps be accounted for by the prolixity of its contents.

The alphabet adopted by Mr. Gall was the common English letter, modified so as to produce angles instead of curves.

In addition to the books above-named, he printed the Gospels of St. Matthew, St. Mark, and St. Luke, the Acts of the Apostles, some of the Epistles, and several religious tracts. The surface of the embossed print in the later books is fretted, so as to produce a sense of roughness to the touch, which modification it was supposed added clearness and durability to the print; but it never met with much favour from finger-readers. In 1838, Mr. Gall again modified his alphabet, by bringing the shape of the letters into greater resemblance to the common type, and by the use of capitals in their ordinary places. He received some small assistance in his printing enterprise by grants of money from the British and Foreign Bible Society, and from the Religious Tract Society, but the aid obtained was very inadequate, and it is matter of surprise that out of more than twenty institutions, then existing in Great Britain and Ireland, for the education of the blind, not one seriously adopted his system of reading. He, however, broke up the uncongenial soil, and prepared it for the labours of others. A day-school was established in Edinburgh mainly by Mr. Gall's influence, which for a long time adopted his

system of reading, but has now resigned it, chiefly, it is supposed, for want of books. In 1837, appeared a small volume, entitled 'An Account of the Recent Discoveries which have been made for Facilitating the Education of the Blind,' which was sold for the benefit of the above school, and seems to have been written by Mr. Gall. It was published by his son, who, some years after, became the senior partner in the firm of Gall and Inglis. Before quitting this subject we cannot refrain from remarking on the inexplicable neglect with which Mr. Gall has been treated. Although he was the undoubted reviver of tangible print in Europe, and the introducer of the art into Great Britain, yet writers who pretend to give an account of tangible typography can find no place in their books for the name of James Gall. And although Chambers's 'Cyclopædia' was published in 1859, in Edinburgh, near to which city Gall then lived, yet it makes no mention of his labours, or in any way refers to his system in its article on the blind, which is the more remarkable as space is found to give specimens of the alphabets used by some of his successors.

Without indorsing the views of Mr. Gall in every respect, we must say that the blind should never forget the man who printed the first book in English for their use, and that we hope some day to see a memorial tablet, or statue, placed in a suitable position to his memory, with an inscription adapted to the circumstances of the case. That Mr. Gall, though unsuccessful, to a very great extent, never doubted as to the ultimate triumph of his views is shown by a letter addressed to the author of these pages in 1854, in which he says, "I intend detaining *this* (letter) till I can send you a specimen of what the literature for the blind is to arrive at. When? is a question for future generations, but not more certainly did Galileo predict of his theory in astronomy, or Bacon his theory of philosophy, or Newton his theory of gravitation than I do for a

successful literature for the blind, as simple, as acceptable, as economical, and nearly as portable as the common literature of the day." In 1832, the Edinburgh Society of Arts offered a gold medal, of the value of £20, for the best communication on a method of printing for the blind, in consequence of which announcement, nineteen different alphabets were submitted to the Society between the 9th of January, 1832, and the 25th of February, 1835. Of this number, sixteen were of what is called a purely arbitrary character, *i. e.*, were not formed from the Roman, or common English alphabet.

The problem the society submitted for solution was, the best means to produce cheapness and tangibility in connection with an alphabet, suited alike to the fingers of the blind and the eyes of the sighted. As to the propriety of putting the subject in this form, we do not propose now to consider, this part of our book being strictly historical. We shall, however, hereafter attempt to give an analysis of the subject, with a view of employing the experience of the past for the improvement of the future. Of the nineteen competitors for the gold medal above-named, only two were blind, Alexander Hay (the teacher of Greek and Latin), and Robert Milne (one of the inventors of writing by means of a string alphabet), but their propositions met with no favour; Mr. Gall was also among the unsuccessful candidates. The investigations of the Edinburgh Society of Arts seem to have been conducted with great deliberation; the medal being offered in 1832, communications being received up to 1835, circulars and specimens of the different alphabets being sent to the various blind schools in 1836, and the decision arrived at in 1837. The advice followed by the Society of Arts is said to have been given by the Rev. W. Taylor, of York, and Mr. Alston, of Glasgow, by whose recommendation the medal was awarded to Dr. Edmund Fry, of Type Street, Chiswell Street, London, whose alpha-

bet consisted of the ordinary capital letters, deprived of their serifs, or small strokes.

It may be observed that although the alphabets were sent for examination to the different schools for the blind, yet as the inmates of these establishments were all young, their opinion was of little value, nine-tenths of those without sight being adults.

Mr. Alston.

In 1836, the Rev. W. Taylor began to print, in York, with Fry's type, and on October 6, of the same year, Mr. Alston exhibited his first specimens at a public examination of the pupils at the Glasgow Institution, after which he made an appeal for contributions for a printing-fund, which met with a hearty response, especially from the ladies of Glasgow, and he issued a few elementary books in 1837. With such zeal did Mr. Alston pursue his work, that the whole of the New Testament was embossed in the next year, and in December, 1840, he completed the printing of the Old Testament, the work being accelerated by a grant of £400 by the Lords of her Majesty's Treasury. This Bible was divided into nineteen volumes, but as only 200 or 250 copies were printed, when the first edition was exhausted no supply of books could be procured. The size of the type used was very small, and the print was afterwards condemned by many of those who had expressed approval at the commencement of the undertaking. The Old Testament was divided into fifteen, and the New Testament into four volumes, the former being sold for £7. 10*s.*, and the latter for £2. The other works printed at Glasgow were the Psalms and Paraphrases (Scotch version), the metrical Psalms by Tait and Brady, and an English Grammar; also some smaller books, consisting of catechisms of the Church of England, and of the Church of Scotland; the English Liturgy, 'History of the Bible,' Todd's 'Lectures,' 'Meditations on the Sacrament,' 'Selec-

tions from Eminent Writers,' 'Selections of Poetry,' 'Fables,' a 'Musical Catechism with tunes,' a 'Description of London,' a 'Selection of Scotch Songs with embossed tunes,' 'Introduction to Astronomy,' and 'Outlines of Natural History (Quadrupeds).' All these works are now out of print, and since the death of Mr. Alston, which happened August 20, 1846, nothing has issued from the Glasgow press, save a few reprints.

On visiting Glasgow, in 1864, the writer was gratified to find a bust of Mr. Alston erected in the Blind Asylum, with an inscription, stating that he was the printer of the first Bible for the blind. In 1853, an attempt was made to resuscitate "Alston's system," as the mode of printing in capitals has usually been called. A fund was set on foot by the Rev. G. B. Johns, Mr. Johnson, and other gentlemen connected with the School for the Indigent Blind, St. George's Fields, London, and the Gospel of St. John, the Prayer Book version of the Psalms, 'Sunlight in a Cloud,' a Brief Grammar, and Robinson Crusoe, etc. were issued. The vitality of the effort, however, soon died out, and at present it may be said, that "Alston's system" has almost ceased to exist.

Lucas's System.

Mr. Lucas, of Bristol, who had been engaged in teaching short-hand writing for many years, succeeded, in 1835, in forming a stenographic system of reading for the use of the blind. This plan, in its details, resembled very much Byron's system of short-hand. Mr. Lucas had, for some time, interested himself in embossing short lessons for some blind persons with whom he was acquainted, but his attention was more directly turned to the subject from seeing a letter, received by a gentleman in Bristol from Lady Charlotte Erskine, pointing out the necessity that existed for a simple mode of printing in relief. The system of Mr. Lucas consisted in the use of the straight line, the

circle and the point, in the following manner, viz.: the straight line being placed perpendicularly, horizontally, obliquely to the left, and obliquely to the right, gave four characters. By the addition of the dot to either side of these four characters, sixteen additional signs were procured.

The circle, on being divided into four parts, gave as many different characters, and on placing the dot at the extremities of these, eight additional ones were obtained; we thus find that twenty signs were procured from the straight line, and twelve by the addition of the circle, making thirty-two. An additional character was obtained by the use of a very short perpendicular line, and two others, by employing a semicircle to the left, and one to the right smaller than those above-named, thus adding three other characters, making thirty-five, and the use of the circle itself, and of the dot, completed the number thirty-seven; twenty-six of these signs were used for the letters of the alphabet, ten for figures, which also represented double letters, and one for et cetera, the stops being shown by the point being placed at the bottom of the line. Each letter indicated one or more words in general use, as A, and, any; B, by, but; C, can, Christ; D, do, down, debt, etc. Some words were represented by the use of the first two letters, as Br, brother; Gl, glory; Pl, pleasure. Common prefixes and terminations were indicated by one letter, as C, con; B, ble; and in general only such letters as were considered necessary to indicate the sound of the word were employed as Snt, sent; Jon, John; Lit, light. By the means of this system great fluency of reading was obtained, and it is certain that its introduction enabled adults to read, although their fingers were hardened by daily toil; but the plan had particular drawbacks, of which we shall not now especially treat.

On February 12th, 1836, when Mr. Lucas was seventy-two years old, he succeeded in forming a society to

carry out his plans. The association was entitled, the Bristol Society for Embossing and Circulating the Authorized Version of the Bible for the Use of the Blind; in connection with the organization was a day-school, the Bishop of Gloucester and Bristol was the patron, and Lieut.-General Orde was president; and we note with pleasure that at the public meeting held at Bristol, the resolution proposing that the society should be formed was moved by the Rev. Fountain Elwin, a gentleman, who, with his daughter, will ever be remembered with the most sincere gratitude for truly Christian efforts in aid of the blind and of the deaf and dumb, carried on at Bath, through many years of patient labour. Mr. Lucas visited various towns in the west and central counties, in the prosecution of his laudable object, and he even extended his operations to London. In July, 1837, he published the Gospel of St. John, 4to, containing sixty-six pages, with twenty-seven lines on a page, price 3*s.* and 4*s.* 6*d.* The advent of this volume filled him with great joy, but his advanced age, and the nervous excitement caused by incessant conflict with advocates of other methods of reading by touch, together with the change from private life to a public career, so acted on his constitution that he passed away from this world without having realized his expectation of seeing the Scriptures, and a library of general utility, printed on his system. The volume issued by Mr. Lucas contained so many defects, even in the opinion of the friends of the system, that in the following year when the Acts of the Apostles was being prepared for the press, it was determined to employ fewer contractions, to have greater space between the letters and words, and to mark the verses by the use of figures. These alterations so modified the system that the orthography was almost entirely changed, and we must say, greatly for the better. The Acts of the Apostles was published in 1839, price 9*s.* and 10*s.*, and the Gospels of St.

Matthew and St. Luke, price of each 8*s.* 6*d.*, were also issued; the last-named book contained an alteration with regard to the stops which was anything but satisfactory.

In 1840, appeared the Gospel of St. Mark, price 5*s.* 6*d.*, which was the last work published at Bristol, the society in that city being dissolved in the same year, and the type, etc. made over to the London Society for Teaching the Blind to Read, which had been established in 1838, principally by the exertions of Mrs. Percival Johnstone and her relative, Lady Brodie, wife of the eminent surgeon.

The printing enterprise now entirely devolved on the London Society, and in 1841 they published the Epistle to the Romans, the orthography of which was of the most confused kind, oscillating constantly between the method of Lucas, as used in St. John, and the ideas of the Bristol committee as carried out in the other gospels. The embossing of the Epistle to the Romans was entrusted to Messrs. Seeley, of Fleet Street and Thames Ditton; but in 1842 the committee secured the services of Mr. Reading, who in that year printed the Bible version of the Psalms in two volumes. Here again the orthography was altered, but it was more regularly carried out than in the Epistle to the Romans. About this time the Society was much engaged in controversies with the advocates of other systems, and especially with Mr. Frere, the inventor of the phonetic mode. Application having been made by both parties for assistance to Lord Wharncliffe, the then President of the Committee of Her Majesty's Privy Council for Education, something like a quarrel arose between the applicants on the merits of their rival plans, and some recriminative letters, which were published, still further embittered the strife. Desirous of methodizing their system of reading, the committee in 1843 entrusted the arrangement of their publications to the Rev. J. W. Gowering, a blind clergyman,

who had formerly used Frere's method. This gentleman drew up regular tables of contractions, which differed in many respects from those hitherto employed. Generally the alterations were improvements, but the introduction of the mode of spelling words phonetically was a sad innovation. Mr. Lucas and his immediate successors merely omitted letters they considered unnecessary to sound the word, but Mr. Gowring not only took away the original letters, but he also substituted others in their places,—for instance, the word 'brought,' according to Lucas was 'brot,' but Mr. Gowring made it 'brawt;' the word 'taught' was 'taut,' but Mr. Gowring thought it an improvement to make it 'tawt.' These and similar errors of judgment are very much to be deplored; and when it is added that in the subsequent books published, a word was often differently spelt, not only in the same book but often in the same page, it may easily be imagined to what a state of confusion Lucas's system was ultimately reduced. It is extremely painful to the writer to make these strictures, but he feels it his duty to give such information as may warn future caterers for the blind to avoid the sunken rocks that lie too frequently beneath the smooth waters of pleasing experiment. In confirmation of the above statements a few examples are now given.

In the Acts of the Apostles (second edition, published 1845), 9th chapter, 32nd verse, the word 'quarters' is spelt 'qrtrs.' In the 28th chapter, 7th verse, it is spelt 'qartrs.' In the 4th chapter and 30th verse, 'thine' is spelt at full length (thine), but in the 8th chapter, 22nd verse, it is spelt 'thin.' In the 15th chapter and 8th verse, the word 'bear' is spelt 'bare,' but in the 10th verse, in the same page and only six lines below, it is spelt 'bear.' In the First Epistle to Timothy (first edition, 1844) 3rd chapter, verse 3rd, the word 'wine' is put 'wine; in the 8th verse, in the same page, it is 'win.' In the Epistle

to the Hebrews, which is bound in the same volume, 1st chapter, 2nd verse, the word 'made' is spelt 'mad.' Verse 4, on the same page and only five lines distant, it is put 'made.' In the third edition of St. John, published in 1856, 2nd chapter, 3rd verse, the word 'wine' is put 'win.' In the 4th chapter and 46th verse it is spelt 'wine.' In the 1st chapter of the same Gospel and the 8th verse, the word 'bear' is spelt 'bear,' but thirteen lines further on the same page it is put 'bare.' In the occasional services of the Church of England, published 1854, in the first line of Thanksgiving for Fair Weather, 'hast' is spelt 'hst,' and in the next line but one it is put 'hast.' In the title of the Thanksgiving for Peace and Deliverance from our Enemies, 'deliverance' is spelt 'dlivranc,' and three lines below it is put 'dlivrnc.'

The foregoing examples speak for themselves, and render comment unnecessary. But we may remark that they are only a few out of a great number that could be given, and that they are taken by chance and are not in any way the result of special selection. The printing of the whole of the Scriptures was completed on Lucas's system in 1853, and the entire Bible of the Old and New Testament is now sold for £6. 6*s*. 3*d*. to subscribers to the London Society for Teaching the Blind to Read,—the price to non-subscribers being £8. 8*s*. 4*d*. Various modifications of the rules of the system have been made, the last formal alteration being effected in 1858, and the general bearing of these changes has been to lessen the number of contractions. Too much praise cannot be given to the committee of the above-named Society for the liberal manner in which, at some periods of the history of the Institution, they have gratuitously distributed the Holy Scriptures to the poor; and it is much to be regretted that of late years the utility of the Society in this direction has been greatly lessened, and we deliberately give it as our opinion that far more good

was done when the efforts of the managers of the Institution were directed to seeking the blind in their obscure abodes, teaching them to read, and presenting them with copies of the Word of God than now, when nearly all the energies of the Society are exhausted in the maintenance of a capacious building intended to a considerable extent for the reception of those of the blind whose friends are able to contribute largely towards their support.

Frere's System.

Two years after the invention of the system by Mr. Lucas, when Alston had just completed the New Testament in Roman type, Mr. Hartley Frere began his labours for the blind by the introduction of an embossed phonetic alphabet. As early as 1802, Mr. Frere had contrived an alphabet for the sighted, founded on an arrangement of sounds, and in 1837 having his attention directed to tangible reading, he began in London to print books in relief. His alphabet consists of thirty-four characters, to indicate as many sounds,—vowels, in some instances, being shown by dots at the top, middle, or bottom of the line; the characters consist of straight lines, semicircles, and hooked lines. The ten numerals are indicated by the common English figures. As any attempt to give an idea of the system in this place would not only be insufficient, but might also lead to a misconception of a plan which, although we cannot recommend, yet possesses considerable merit, we shall simply remark that the characters are taken from Gurney's method of shorthand, and that they are used in a similar manner to that employed in all phonetic systems. It is especially useful in enabling persons entirely uneducated to learn to read in a short space of time, but it tends very much to vitiate pronunciation, and of punctuation it has none.

Mr. Frere was the first to introduce the practice of placing the lines of reading alternately from left to right and from right to left. As to the advantage of this mode, we will not now inquire, but it was imitated with a slight alteration by Mr. Moon.

Mr. Frere also invented a system of embossing from stereotyped plates, formed by wire characters being soldered upon sheets of tin, thus avoiding the necessity of printing off any more copies of a work than the number actually required for immediate use. These plates also give additional hardness to the relief, and the invention must be considered as the greatest improvement effected in embossing since the days of Haüy. This mode of stereotyping has been adopted by Moon and Pumfrey, and the present writer has also availed himself of it in printing Hamilton's 'Instruction Book for the Pianoforte.'

In 1838, Mr. Frere succeeded in establishing the London and Blackheath Association for the purpose of carrying out his plan for teaching the blind to read, but unlike the London society, formed in the same year to carry out Mr. Lucas's ideas, it was not doomed to take root, but after a few years it passed away, leaving, however, behind it stereotyped plates of several books of Holy Writ, which, owing to Mr. Frere's admirable system of embossing, will transmit the fruits of the London and Blackheath Society to coming generations.

The singleness of heart shown by Mr. Frere in his exertions for the blind is worthy of the highest commendation. His views were confined; but although narrow they were sincere, and sincere narrowness is better than heartless breadth.

Mr. Frere died at a very advanced age, leaving several trustees of his system, among whom was Dr. Armitage, who, however, resigned his trust a short time after being called upon to act.

The Bible has not been completed in Frere's system; but the books printed comprise the New Testament and the greater part of the Old.

Books Printed in Roman Capitals and Small Letters.

We have seen, in an earlier part of this work, how the Rev. W. Taylor, in 1836, approved of the ordinary capital letters as modified by Dr. Fry. Mr. Taylor then thought that uniformity in the height of the characters was one advantage of that system. He, however, subsequently found that, instead of being an advantage, it was really a hindrance. He thereupon modified his views, and advocated the adoption of the common English alphabet, including both the capital and small letters.

About the year 1838, some books were printed privately in this type at York, by Mr. W. D. Littledale, a blind gentleman, whose constant exertions in behalf of his fellow-sufferers are worthy of all praise. In the following year, Mr. Lambert, of York, published a monthly magazine, each number of which consisted of six pages quarto, and sold for 6*d.*, it was issued for two years, but at the end of 1840, pecuniary considerations caused it to be discontinued. The articles were admirably selected, and the enterprise deserved a better fate.

In 1854 an attempt was made to resuscitate the magazine by Messrs. J. E. Taylor and Co., of Little Queen Street, London, but after an existence of about eighteen months, this second issue came to an end. Each number of the magazine published in London, consisted of twelve pages, while the price was 6*d.* as before. Messrs. J. E. Taylor and Co. also printed in the same type, at the expense of the Bristol Asylum for the Blind, a Geography, price 5*s.*; 'The Life of James

Watt,' 3*s.*, 'The Sermon on the Mount,' 2*s.*, and an elementary book. F. W. Clark also published the letter-press of the Six Books of Euclid, several volumes of Ainsworth's Latin Dictionary, and some smaller works in this type. Mr. Clark, although blind, printed the works himself, and the way in which they are executed does him great credit.

Owing to the untiring exertions of the Rev. W. Taylor, this mode of reading was again called into existence in the year 1868, by the formation, at Worcester, of an association entitled the Society for Providing Cheap Literature for the Blind, of which the Bishop of Worcester became president. The society, up to the present time, March 1871, has issued the following publications, viz. :—

	s.	*d.*
The Proverbs of Solomon	1	6
Epistles of St. Peter, 1st and 2nd . .	0	9
Epistles of St. James	0	6
Epistle of St. Paul to the Hebrews . .	1	6
Chambers's Reading Book	1	0
Miscellaneous Reading Book, 2nd edition	0	6
Easy Reading Lessons, 2nd edition . .	0	3
Virgil, Æneid, lib. iv.	2	6
French Grammar (the Parts of Speech)	3	6
German Grammar (the Parts of Speech)	3	6
Lives of Noted Men	1	0
Gospel according to St. Mark . . .	2	6
Prayer Book, Psalms	3	0

Also a Compendium of English History.

The Society for Providing Cheap Literature for the Blind is in close connection with the College for Blind Sons of Gentlemen, Worcester; and we are sure that many of our readers will learn with regret of the death of the Rev. W. Taylor, which took place at Worcester, in the year 1870.

Mr. Taylor may be considered as the founder of both the college and the Society for Providing Cheap Litera-

ture; in him the blind have lost a sincere friend. For more than half a century he took a deep interest in their welfare, and, during the greater part of that time, was the foremost champion of the embossed Roman type.

Printing by W. Moon.

Mr. Moon, who was for some years engaged in teaching the blind to read, on Frere's plan, in his capacity as master of the Blind School, 99, Church Street, Brighton, commenced about the year 1845 to form a new alphabet. In 1847 he printed his first book, and entertained the design of issuing a monthly magazine, which was, however, abandoned after the publication of a few numbers. The alphabet adopted was formed chiefly from Mr. Frere's characters, and contained at least sixteen letters, which were only Frere's signs with other names. Frere's plan of reading alternately from left to right, and from right to left, was acted upon with slight alteration, as well as his mode of stereotyping, as already stated in a previous article.

We are aware that Mr. Moon claims all this as original, and states the discovery of it in such a way as would make it appear to have been almost miraculous. How he can do this we are at a loss to understand, but we do know that it is the office of a writer of an historical sketch to state facts impartially and distinctly, and our duty in this respect we must endeavour to perform. About a year or two after the introduction of his system, an alteration was made in the alphabet, the letters *m* and *y* being represented by fresh characters, and various modifications being made in several other letters and numerals. In this system, twenty-six characters are used to indicate letters, ten for figures, and one for the *&*. The words are in general spelt at full length, but nine simple contractions are employed. The plan certainly possesses the merit of enabling per-

sons to learn to read in a short space of time, and it has been of incalculable service in bringing thousands of the blind in contact with the word of God, who probably, but for its means, would never have enjoyed that invaluable privilege; but ease of acquirement is not everything that is to be desired, and therefore, while rejoicing at the good accomplished, our satisfaction should not induce us to overlook defects. It is not, however, proposed here to enter into an analysis of the system, but something will be said on this branch of the subject anon. We have observed that the first book was printed by Mr. Moon in 1847; this was done by movable type, the expense of which was borne by a gentleman, who, we believe, was the late Mr. Chreswick, of St. John's Wood; he, like Mr. Moon, was without sight. The stereotyping of the New Testament was commenced in 1848, and completed in little more than three years, the whole Bible being finished in 1858. The price of the New Testament, stitched, was £5. 1*s*. 6*d*., and the Old Testament, £15. 15*s*., extra being charged for binding. The cost of stereotyping was defrayed by public subscription, and grants from the British and Foreign Bible Society. A building was erected for Mr. Moon, at Brighton, by subscription, in 1856. The Committee of the British and Foreign Bible Society, feeling that the cost of the books was excessive, commenced themselves, in 1865, to emboss the Bible, which now may be procured for £8. 11*s*. 7*d*. This induced Mr. Moon, in 1869, to reduce the price of his books, so that the entire Bible is now sold by him for £6; and in this enterprise he was assisted by a special subscription. In the books printed by the Bible Society, the common English numerals, slightly modified, are used instead of those employed by Moon.

Various societies have been formed in different localities, for teaching the blind to read on this system at their own homes. The scheme was set on foot in Lon-

don, by Miss Graham, in 1856, and has since been extended to every considerable town in the kingdom. At first, sighted instructors were employed, but of late years the example of the Association for Promoting the General Welfare of the Blind has been followed, and the work is now principally carried on by teachers without sight. The plan adopted is, for an instructor to call periodically on the blind at their own homes, to teach those to read who require instruction, and to lend books to the more advanced pupils, which books are exchanged for others when the teacher again visits the neighbourhood.

This plan was proposed, by the writer of these pages, in 1851, to the managers of the London Society for Teaching the Blind to Read on Lucas's System, but the suggestion was not deemed worthy of notice. He, however, himself commenced a lending library in 1854, which was attended with much good. Mr. Gall, in his work, recommends the establishment of such libraries, but of this the writer was not then aware. Specimens of about fifty languages have been printed in Moon's system, but in general, the specimens consist of only a few pages.

Abortive Inventions for Reading.

THE SYSTEM BY G. A. HUGHES.

In addition to the foregoing modes of reading, various plans have been proposed, which have never got beyond the realms of theory, or have only had an ephemeral existence. The chief of these is that suggested by the late Mr. G. A. Hughes, of Ramsgate, which consisted in placing a small dot, and one of a larger size, in different positions, so as to represent all the letters and numerals. Its simplicity made it easily applicable to embossing by hand, but it possessed certain radical defects which prevented it obtaining even a temporary

success. In 1843, when Mr. Hughes had been blind about six years, he published, at Ramsgate and London, a work entitled 'The New Punctiuncula Stenographic System of Embossing.' This work consisted of elementary lessons, with embossed specimens. In 1847, appeared 'First Lessons for the Blind,' in Hughes's raised characters, and in 1848 was published a book, printed in relief, being an explanation of his system of embossed music. In the later years of his life he seems to have liked his own system so little that he invented another, so that there really are two modes of reading in existence by G. A. Hughes; neither of them, however, is free from grave errors. Hughes's method of writing and reading is supposed by many to have been an imitation of the system of M. Braille, of Paris, but there are no solid reasons for this opinion. Mr. Hughes died in 1863, in London, after six months' illness, and we regret to add that some time before his death he was reduced to great distress. His system, if ever it may be said to have existed, has now quite disappeared. It, nevertheless, suggests several valuable points, and many persons have succeeded better than Mr. Hughes who deserved it less.

THE SYSTEM BY BENIOWSKI.

The late Major Beniowski, (who between the years 1840 and 1860 caused some sensation in London with his system of artificial memory, a mode of phrenotypics, and his improved method of setting and distributing type,) in prosecution of the versatility common to his nation (Poland), turned his attention to the blind. In the opinion of the gallant major, all that was required to enable the blind to read and to have a library co-extensive with that enjoyed by the public at large, was that every printer, after completing the required number of copies of a page of an

ordinary book, should simply print a few pages on one side with very strong pressure, so as to cause an embossment for the use of the blind,—he, Beniowski, being simple enough to imagine that if the blind would only be content to read the print in the reverse position, their power of touch would enable them to overcome the difficulties of the smallness of the letters and the multiplicity of the strokes. If the major had not actually embossed a book in illustration of his dream, the mention of it here would be unpardonable. But we hope that enough has been said to induce any visionary who may honour us by perusing this work to abstain from playing any similar trick in connection with the treatment of the blind. The title of the book above-named is Major Beniowski's, or 'Phrenotypic Primer for the Blind.' It is embossed on his plan, and is utterly worthless.

THE SYSTEM BY MR. MITFORD.

About the year 1865 Mr. B. Mitford, of Cheltenham, printed some pages in the ordinary Roman capital letters, so arranged that the arms of the reader moved to and from him instead of from left to right, the fingers first coming in contact with the tops of the letters instead of the sides, and each line being placed to the right of the preceding, instead of below it in the usual way. After a careful examination, we are at a loss to discover any advantage in this change, and we believe that if the plan were fully carried out many evils would be developed.

Systems of Reading in America.

It has often been stated very confidently that there is only one plan used in America for enabling the

blind to read. This is incorrect, as from the first introduction of tangible print into the United States, two systems have always been employed. For the last twenty years there have been three, and there are now at least four in use in different parts of the Union.

Almost simultaneously, in 1833, printing for the blind was commenced in Boston and in Philadelphia. The mode adopted by Dr. S. G. Howe, of Boston, was somewhat like that of Mr. Gall, viz. the smaller English letters without capitals, angles being employed instead of curves. Dr. Howe's letters were, however, less angular, and the lines were smooth and not fretted; the letters E and G were modifications of the capitals, instead of the smaller letters. Printing in relief at Philadelphia was begun by Mr. Freedlander, the Principal of the Pennsylvanian Institution for the Blind. He employed the Roman capitals to the exclusion of the small letters. It thus appears that two different modes of printing were commenced the same year, the one in New England and the other in the Keystone State, and from these enterprises the following results have accrued. Dr. Howe, the philanthropic Physician and Principal of the Perkins Institution for the Blind, Boston, published in 1836 the New Testament in four volumes, which sold for one dollar per volume, or 16*s.* 8*d.* for the entire New Testament. This was the first New Testament printed for the blind in any language, and in cheapness it has not been equalled. It may be remarked *en passant* that the Acts of the Apostles was issued in 1834. The Old Testament was completed in 1842 and comprised six volumes, the price of which collectively was £3. 6*s.* 1*d.*, so that the entire Bible was sold for £4. 2*s.* 9*d.*, which, we believe, is the present price in America; the stereotyped plates of the Scriptures having been bought by the American Bible Society (New York). The other works issued by the press of the Perkins Institution are Lardner's Universal History, three volumes, £1. 17*s.* 2*d.*; Geo-

graphy, one volume, 12*s.* 6*d.*; Howe's General Atlas, 12*s.* 6*d.*; Atlas of the United States, 8*s.* 4*d.*; Atlas of the Islands, 10*s.* 5*d.*; The English Reader, Part I., ditto, Part II., price of each, 12*s.* 6*d.*; The Dairyman's Daughter and The Hervey Boys, each 4*s.* 2*d.*; The Pilgrim's Progress, 10*s.* 5*d.*; Baxter's Call to the Unconverted, 6*s.* 3*d.*; Life of Melancthon and a Book of Hymns, each 4*s.* 2*d.*; Constitution of the United States and a Book of Diagrams, each 3*s.* 1*d.*; Viri Romæ, 8*s.* 4*d.*; Pearce's Geometry with Diagrams, 8*s.* 4*d.*; Political Class-Book, 8*s.* 4*d.*; First Table of Logarithms, 4*s.* 2*d.*; second ditto, 8*s.* 4*d.*; Principles of Arithmetic, 4*s.* 2*d.*; Astronomical Dictionary, 6*s.* 3*d.*; Natural History and Natural Philosophy, each 12*s.* 6*d.*; Cyclopædia of Geography, six volumes, £3. 14*s.* 4*d.*; also several devotional works. To this list must be added Milton's principal works in two very large volumes, and Diderot's Letter on the Blind.

Charles Dickens, after his second American tour, presented to Dr. Howe a considerable sum in order that one of his own works of fiction might be printed for the blind. The greater number of the above-named books are stereotyped, so that they may always be procured, and they are sold at cost price.

The account printed in the Jurors' Report of various books, etc. for the blind exhibited in the Exhibition of 1851 was written by Mr. Stevens, of New York, and the present writer had the gratification of furnishing him with many facts.

The books printed in Philadelphia in Roman capitals since 1833, are:

	$ c.
The Books of Ruth and Esther	2
The Book of Proverbs	2
Die Ostereir (The Easter Eggs), in German, 1 vol.	2
The Student's Magazine. In 7 vols., each . . (Consisting of Original Essays by the Pupils, and Selections.) Sold separately.	2

	$ c.
The Select Library for the Blind. In 5 vols. Sold separately, each	2.50
(This Series contains The Traveller, and the Deserted Village, by Goldsmith, and other selections from standard English authors.)	
A Compendium of the French Verbs. Compiled by T. C. M. Mérillat. In 1 vol. . . .	2.50
A Selection of Psalms and Hymns. In 1 vol. .	2.50
A Selection of Church Music, in the usual musical characters. Arranged and figured for Thorough Bass. In 3 volumes, each . . .	3
A Short Dictionary of Italian and other Words used in Music.	
A Dictionary of the English Language for the Use of the Blind. In 3 vols. For the set .	14
A Brief Memorial of the late Judge John K. Kane. By Robley Dunglison, M.D., LL.D. 1858.	
A Memorial of the late Colonel Albert G. Waterman. By Franklin Peale. 1862.	
A Memorial of the late Robley Dunglison, M.D., LL.D. By Franklin Peale. 1869.	
Life of George Washington. In 2 vols.	
The Gospel according to St. Mark.	
Select Poetry. Chiefly from standard authors. In 1 vol.	3
English Grammar. (Printed by N. B. Kneass, jun.) 2 vols.	7
Introductory Primer. (Combined print. By N. B. Kneass, jun.)	1.25
Catechism of the Protestant Episcopal Church. (Combined print. By N. B. Kneass, jun.) .	50
Catechism of the Roman Catholic Church. (Combined print. By N. B. Kneass, jun.) .	1
Independence Hall and Declaration. (In capitals)	1.25
Kneass' Philadelphia Magazine. Vols. 1, 2, and 3, each	3.50
Important Events of 1867.	1.25

	$ c.
Prayer Book of the Roman Catholic Church .	3.25
Elementary Arithmetic	1.88
Tables of Money, Weights, and Measures . .	1
Poetry of England	3
Merchant of Venice	2.50
Poetry of America	3
By the National Printing Association :—	
Dictionary of Musical Terms	3
Compendium of American Literature	3.25
Beauties of Shakspeare	3
Etymology	3

We hope we may be excused for remarking that the value of the American dollar is 4*s*. 2*d*., and the cent., ½*d*.

Mr. Snider, of Philadelphia, printed on both sides of very thick paper in 1833. The paper was subjected to great pressure between two plates. The plan was, however, abandoned. The printing of the work on church music above-named was superintended in 1850 by Mr. Snider, who probably was the same gentleman.

In 1848 printing was commenced at the Institution, Richmond, Virginia, the system employed being neither that used at Boston nor at Philadelphia, but a combination of both, inasmuch as the capitals and smaller letters of the Roman type are employed in a similar way to that used by the sighted: various school books were printed, aud about the year 1863 the French system known as that of M. Braille, hereafter to be described, was introduced into the Institution for the Blind, St. Louis, Missouri, by Mr. Henry Robin, who invented a method of printing by which only five different sorts of type were required to emboss the Braille system.

The pupils of the St. Louis Institution embossed many books by hand with the writing-frame, and many of the blind of the State of Missouri prefer the system to the others used in America. It may be also mentioned that a modification of Braille's system

was made some years ago by Mr. Adams, of New York, but we believe that no books have been printed on the plan.

Before ending this branch of the subject, it may be observed that the Boston or Howe's system obtained the medal at the London Exhibition of 1851, but very little importance can be attached in such a matter to the opinion of a number of sighted persons unable to read with their fingers.

M. Braille's System.

About the year 1852 a mode of printing was introduced into the Paris Institution, of which the late M. Braille has the credit of being the inventor, but his claim is disputed by many, who state that M. Charles Barbier, of Laserre, an officer of the French artillery, originated the plan. When, however, we consider that M. Braille was blind, and that his claim is allowed by the French Government, it seems just to infer that if M. Barbier had anything to do with the invention it was very little indeed. The characters in this system are formed by six dots exactly of the same kind, which represent letters according to the positions in which they are placed, *e. g.*, one dot at the top of the line is A, two dots placed perpendicularly, B; two dots placed horizontally at the top, C, etc. A considerable number of contractions are employed in this system. One of the great advantages of the plan is that it is easily written, of which more hereafter.

Braille's system is now used at the Paris Institution, to the exclusion of all others. It has too all but a monopoly at the schools for the blind at Lausanne, Brussels, Amsterdam, Madrid, Rio de Janeiro, and St. Louis, Missouri. At Lausanne, the French New Testament was commenced to be printed in Braille's system in 1861, and it has since been completed in eight volumes.

Braille's method has been modified by the late Abbé Carton, of Bruges, so as to have some resemblance to the common alphabet. It does not appear, however, that the modified plan has been adopted by any institution, except that of Bruges, in which it was first introduced.

The following books have been printed at Paris, in Braille's system, namely:—

	f.	c.
Recueil de Prières usuelles, 1 vol. in-8vo . .	2	75
Offices du Matin et du Soir, 1 vol. in-8vo . .	2	50
Catéchisme de Paris in-4to, 1er vol.	5	50
„ „ 2de vol.	„	„
Imitation de Jésus-Christ, 4e livre, 1 vol. in-4to	6	„
Recueil de Cantiques, par Gaultier:		
A Jésus-Christ, 1er vol. in-4to	5	50
A la Sainte Vierge, 2e vol. in-4to . . .	4	50
Recueil de Cantiques, par le Père Hermann:		
A la Sainte Vierge, 1er vol.	5	50
A Jésus-Christ, 2e vol.	5	„
Arithmétique élémentaire, par Dufour, 1 vol. in-4to	5	„
Grammaire francaise, 1re partie, 1 vol. in-4to .	5	„
„ „ 2e partie, „ .	3	„
„ „ 3e partie, „ .	6	„
„ „ 4e partie, „ .	5	„
Histoire naturelle, 1 vol. in-4to	6	„
Géographie méthodique, 1 vol. in-4to . . .	4	„
Géographie de la France, in-4to, 1er vol. . . .	4	„
„ „ 2e vol.	4	„
„ „ 3e vol.	3	50
Tableaux chronologiques de l'Histoire ancienne, 1 vol. in-4to	3	50
Tableaux chronologiques de l'Histoire ancienne, du moyen âge, 1 vol. in-4to	3	50
Tableaux chronologiques de l'Histoire moderne, 1 vol. in-4to	5	„
Cosmographie élémentaire, 1 vol. in-4to . .	2	„
Cosmographie, par Delille, in-4to, 1er vol. . .	5	„

	f.	c.
Cosmographie, par Delille, in-4to, 2e vol. . .	5	„
„ „ 3e vol. . .	5	„
Éléments de Physique, in-4to, 1er vol. . . .	4	„
„ „ „ 2e vol. . . .	4	„
Choix de Morceaux en Prose, 1 vol. in-4to . .	3	50
„ „ en Vers, „ . . .	5	„
Fables choisies de La Fontaine, in-4to, 1er vol. .	5	„
„ „ „ 2e vol. . .	5	50
Fables choisies de Florian, in-8vo, 1er vol. . .	2	„
„ „ „ 2e vol.	2	„
Principes élémentaires de Musique, 1 vol. in-8vo	2	„
Méthode de Musique, 1 vol. in-4to	5	„
Solfége pratique, 1re partie, 1 vol. in-4to . .	5	„
„ „ 2e partie, „ „ . .	4	„
Cours d'Harmonie, 1 vol. in-4to	5	„
Offices notés	17	„
Méthode de Violon, par Kreutzer, 1 vol. in-4to .	5	„
„ „ par Spohr, 1 vol. in-4to . .	3	„
Études de Violoncelle, 1re partie (Stialzni, Dotzauer, Merk), 1 vol. in-4to	5	„
Études de Violoncelle, 2re (Duport, Franc-homme), 1 vol. in-4to	5	„
Méthode de Contre-basse	2	50
Méthode de Cor	5	„
Méthode de Piano, par Lecarpentier, 1er vol. in-4to	4	„
„ „ par Lemoine, 1er vol. in-4to .	5	„
„ „ „ 2er vol. in-4to . .	5	„
„ „ par Kalkbrenner, 1 vol. in-4to	5	„
Études de Piano, par Cramer, 1 vol. in-4to . .	3	50
„ „ par Kalkbrenner, 1er vol. in-4to	4	„
„ „ „ 2e vol. in-4to	4	„
Morceaux, Orgue, 1 vol. in-4to	5	„

READING IN GERMANY, AND SOME OTHER COUNTRIES.

The common alphabet is used in Prussia and the other German States; also in Austria, Russia, and Denmark. Relief print was introduced into Vienna by Klein, in 1804, and was adopted at St. Petersburg, and Berlin, 1806, at the instance of Haüy.

The form of the common alphabet generally used in these countries is that of the Roman capital letters, and in the books published by the Bible Society at Stuttgart, the letters are roughened after the manner employed by Mr. Gall. Some use of Moon's alphabet is made at Berlin and Rotterdam, and it is employed at Stockholm with modifications, but the common letter is also used in Sweden, as well as in Norway.

In all these countries, however, reading by the blind exists more in name than in reality.

Before quitting this branch of the subject we must not omit to mention the praiseworthy labours of M. Kœchlin, the Blind Director of the Institution at Illzach, near Mulhausen, or Mulhouse.

In 1857 he began to print the Bible in German, and by the generous aid of the Bible Societies of Stuttgart, Mulhouse, Strasburg, and Colmar, he was enabled to complete it in 1863.

The type employed is that used by the Bible Society of Stuttgart, a description of which has been already given. This great work, which was the first German Bible for the Blind, was completed in sixty-two volumes, and sold for £8. 8*s*. 4*d*. Owing, however, to a generous gift from Russia, the Stuttgart Society has since reduced the price one-half, so that a German Bible may now be bought in relief print for four guineas.

AN ANALYSIS OF VARIOUS SYSTEMS OF READING.

In considering the means best adapted for enabling the blind to read, it is not only desirable to understand the nature of the sense of feeling as it exists generally in the human race, but it is also necessary fully to comprehend the powers of touch, as enjoyed by the persons for whom the means of reading are especially intended. It is generally supposed that to be blind necessarily involves the possession of superior powers of touch. This is incorrect, for the tactual power of many blind persons is inferior to that enjoyed by the average sighted man.

This deficiency is no doubt principally caused by the existence of defects other than blindness, but as the individuals possessing such defects form no inconsiderable proportion of those for whom tangible print is required, the consideration of their circumstances cannot be overlooked. Considering the state in which the sense of touch exists among the blind, we think the examination of the subject may be divided into three heads, namely, "The Keen Touch," "the Medium Touch," and "the Dull, or Obtuse Touch." And a full investigation of the subject will indicate that greater extremes could scarcely be shown than those existing in the powers of touch, as possessed by different blind persons. Those having keen touch can perceive the smallest inequalities in highly polished and very level surfaces, whereas those in whom the sense is dull can scarcely feel, so as to appreciate the commonest objects. The great error that has prevailed ever since the invention of raised letters is the supposition that the sense of touch exists with equal intensity in all blind persons, and that to render this apparent the due cultivation of the sense of feeling is

all that is required. This erroneous conception has been fruitful in mischief, and it is strange that its fallacy has not appeared to some of those who have laboured in this department of science. In considering then that embossed books have to be provided for those who possess the sense of touch in three different degrees, which degrees by no conceivable effort can ever be made identical in power, the question naturally suggests itself, "Is it possible to contrive a mode of reading available alike for the three different classes above-named without placing a burden on the persons belonging to either class, which in fairness they ought not to bear? In other words, can books be printed so as to give all the advantages that are desirable to those whose touch is keen, to those who have it in a medium degree, and to those in whom the sense is very dull?"

Now we think it must be admitted that to oblige the dull to use no other books than those employed by the keen would be utterly absurd, seeing that they could not even perceive one letter from another; and yet absurd as this seems, it has actually been acted on, and that very widely, for the books printed on the alphabetical systems used in America, Germany, and this country are utterly useless to nine-tenths of the blind. They can be read only by a very few; and it may be affirmed that they have not enabled one single person to read with that degree of ease and fluency which is desirable. If then it is unjust to say to those whose sense is *dull*, "If you cannot read the books which are deciphered by those with *keen touch* you shall not have any at all," is it on the other hand right to oblige *the keen* to read books found necessary for the *dull*, and to compel them to endure the impediments arising from peculiarities in the form and size of the letters, and thus oblige their fingers to pass over a very large amount of unnecessary space, and so to interfere with the comfort and speed of reading, and also to

compel them to pay enormous sums for volumes, for which on account of their bulk they can scarcely find house-room ?

It may however be said that there is still the case of those having a *medium* touch, that we have not yet considered, and it is probable that the type which would be found suitable for persons in this middle condition, might also be used without inconvenience by those included in the extreme classes. This, however, cannot be done, for if those with *keen* touch would consent to the necessary sacrifice, the great majority of those with the *dull* perception would be unable to avail themselves of it, however willing they might be to do so. Under these circumstances it becomes an object of great importance to discover how many systems of embossed print are really necessary to provide for the wants of the different classes of the blind, and also to ascertain if any of the systems now in use possess the qualities requisite to enable them to provide efficiently for the necessities of finger-readers. And here we think it advisable to define what experience has shown to be absolutely necessary in this case, and also to proceed to ascertain how far the various modes of tangible print now in use efficiently fulfil these conditions. We know that some persons maintain that the books used by the blind should be such as can be read by the sighted, in order that the latter may be enabled to teach the former; but if the blind are not able to learn what the sighted wish to teach them, or if the learning of it is to stand in the way of the acquisition of something which would bring them far greater advantage, the communicating of such unprofitable instruction would be far from desirable.

The books of the blind being printed so as to be read by the sighted is not of the slightest importance, for it must be admitted that whatever is intended to be perceived by a given sense should be suited to the peculiar requirements of that sense.

If the letters which are supposed to be best adapted to the sense of sight, be found on examination to be also best adapted to the sense of touch,—good! But if not, then the blind, for the purpose of acquiring knowledge by reading, want nothing to do with the sighted alphabet. It is also said that the mode of reading should be capable of being easily written. Well! if the best mode of reading should also prove the best mode of writing, we should deem it an advantage. But in dealing with reading, we must keep that subject alone in view, to the rejection of all extraneous matter near or remote.

Reading with Certainty.

We think it must be generally admitted that the best system of tangible print is that which enables the largest number of blind persons to read with the greatest amount of certainty, ease, and fluency, and which also includes the advantages of cheapness and smallness of bulk. And now we will endeavour to ascertain how far the various systems at present in use fulfil the requirements of this definition. To obtain *certainty* it is obvious that no character should represent more than one thing,—that the same word should always be spelt in the same way, that when part of a word is in one line, and part in another, the circumstance should be sufficiently shown in order that neither part may be taken to indicate an independent word, and that the characteristics of each letter should be so clear and well developed that there should be no reasonable ground for it being mistaken for any other letter. In the systems known as Alston's, the German, and the Philadelphian, the characteristics of the letters are so ill developed that the B, D, and S, the H and the N, are often mistaken for each other. In the Boston or Howe's type the A, G, and O, and the I, L,

and T, are frequently mistaken. The above remarks apply to a greater or less extent to the systems known as Gall's, the Virginian, etc. In Lucas's system, as it at present exists, one character is often employed to represent more than one thing, without any sign being given to indicate the variation of power, *e. g.* the letter *A* when standing alone indicates both the word *a* and the word *and;* the letter *I* at the end of a word may simply be the last letter of a syllable, or it may indicate the termination *ing;* it is, therefore, not surprising to find that the passage in John, chap. vi., v. 4, "And the Passover *a* feast of the Jews was nigh" has been very frequently rendered by Lucas's readers, and the Passover *and* feast of the Jews was nigh; and with such a word as *radii,* the uninitiated, adhering to the rules of the system, would certainly call it *radi-ing;* and the matter would not be mended by the rule which provides that when a mistake is likely to arise, the word should be spelt at full length, for spelling would not at all indicate that *a* did not mean *and,* and that *i* did not indicate *ing.* Much uncertainty is also caused by such characters as *ff* representing 3, *three, third,* and *from;* from *t h,* indicating 4, *four, fourth,* and *thou;* and from *s h* being employed for 5, *five, fifth, shall,* and *shalt.* The omission of the vowels, whenever in the opinion of the editor they are unnecessary to the sound of a word, is the cause of much uncertainty to the reader; for how variable the opinion of an editor may be, we have already shown in previous remarks on Lucas's system.

In Frere's system certainty is quite destroyed by the way in which the vowels are treated; sometimes they are used, and sometimes omitted. When used they are generally indicated by a small dot, which if at the top of the line represents *a* or *e,* if in the middle *i,* and if at the bottom *o* or *u;* the same kind of dot being also used to separate syllables; but confusing as this may appear, it is not the worst, for a vowel that is intended

to be sounded in the middle of a word is often put at the end. These facts speak for themselves, and need no further comment.

In Moon's plan of reading no hyphen is employed to show that part of a word is in the next line, so the parts of a word may sometimes be taken as two independent words; thus, the phrase *Athelstan* died, has been read *"at Helstan died."*

Reading with Ease and Certainty, etc.

In the various systems formed from the Roman alphabet the blind are prevented from reading with ease by the multiplicity of strokes used in the construction of the letters, the determination of three or four things being usually necessary before the finger-reader can accurately determine the name of the letter under examination. This difficulty is further increased by the circumstance that the characteristics of a letter are often to be found in its interior, instead of being on the outside; and when the various letters are put together to form long words, the difficulty experienced in reading even by those with very acute touch can scarcely be imagined. If any one with sight doubts this, let him set to work and try to read with his fingers one of the alphabetic systems; and surely, if he will not make such a simple experiment, he has no right to dictate to the blind as to the alphabet they shall use. The almost entire absence of contractions in the systems taken from the common alphabet militates greatly against fluent reading, and also largely increases the price and bulk of the volumes. Whatever interferes with certainty also to a considerable extent lessens the amount of ease experienced in reading.

In addition to what has been already stated on this head regarding Lucas's system, the following peculiarities also tend to diminish the comfort of the reader.

In the alphabet there are ten characters represented by oblique lines which present more difficulties to the touch than those of the perpendicular or horizontal form, *e. g.* *J* is often taken for *H*, and *L* for *W*. The dots used at the extremities of the perpendicular and other lines are frequently supposed to be on one side, when they are intended to be on the other.

Those who practise two or more hours a day during several years, or who have naturally a keen touch, do not perceive these difficulties, but they are painfully evident to ordinary learners. As the use of vowels is now far more frequent, owing to the last modification of the system, and as *E* and *U* are difficult to be perceived, another interference is thus caused with the comfort of the reader.

Mr. Lucas represented the letters *E* and *U* by very small semicircles, as they did not often occur in the mode of spelling employed by him, but now that the orthography of the system more nearly approaches full spelling, the arrangement of the letters, as regards their tangible power, effected by Mr. Lucas no longer holds good. The contractions employed in Lucas's system give fluency in reading, at the same time that they lessen the cost and bulk of the volumes, but the irregular way in which they are applied sadly interferes with other important considerations. The pleasure of reading in Moon's system is lessened by the number of oblique characters employed. This is more especially true with regard to the signs used for numerals, which were found so defective that they were altogether rejected by the Bible Society, and some other institutions when they commenced embossing books for themselves. Indeed so little dependence is placed on the figures even by Mr. Moon himself, that when in his books it is necessary to give a date, he generally spells it at full length, *e. g.*, instead of 1847 he puts eighteen hundred and forty-seven. In volumes where numbers frequently occur this evil is very great. The embossed

works being usually produced from plates upon which detached pieces of wire are soldered, the oblique lines are seldom placed at the same angle, so that the exact inclination of two letters of the same name often differs considerably. The practice of reading alternately from left to right, and from right to left, as adopted in Moon's system, possesses the disadvantage of often presenting the same letter to the reader in two aspects, *e. g.*, in proceeding from left to right and coming to the letter *c*, the finger first comes in contact with the round part of the letter, but in reading from right to left the finger first comes in contact with the points of the letter. In the case of the letter *D*, on proceeding from left to right, the reader first perceives the points; and on reading from right to left he first perceives the round part. In other words in reading from left to right, the front of the letter is first perceived; but on reading from right to left the back of the letter is perceived first. The great effect of this mode in preventing fluent reading must be self-evident, especially when it is stated that no fewer than twenty-seven characters, out of the thirty-seven used for the alphabet and figures, present to the reader this double aspect.

The fluency desirable is that which enables a person to read so as to stop only at the points of punctuation. If it be necessary to print the lines alternately from left to right, and from right to left, the alphabet should be composed of such characters as only present one aspect to the reader, whether approached from one direction or the other, and the formation of such an alphabet is by no means difficult. The fewness of contractions, and the nature of the characters employed, cause books in this system to be more expensive and bulky than those printed in any other way; and the price of the volumes was further increased for a long time by the profits realized by Mr. Moon, who, unlike the promoters of other systems, appears not to have

sold his books at cost price. In the mode of reading from left to right, and from right to left, employed by Mr. Frere, many of the characters are entirely reversed, so that on feeling a character in one line, and finding that the opening is to the right, on examining a character of the same name in the next line, the opening will be found to the left. This is done to convey the impression of uniformity on the first contact with the finger; but after the first contact is passed, the illusion is dispelled, and on examining a given character, it is found to be quite of an opposite shape to its namesake in the previous line. This arrangement is attended with much inconvenience to those who do not spend the greater part of their time in reading. The use of sounds instead of letters often produces a hesitating and vitiated pronunciation, and the want of a regular method of punctuation is an evil of no little weight.

In the system of M. Braille, perhaps the greatest defect is that arising from all the characters being formed by the multiplication of one kind of dot, which fails to present the touch with the requisite amount of variety of surface; this greatly interferes with the utility of the system for reading, but for writing the method has many advantages. When at Paris and Brussels, the writer found that the most proficient pupils could read in Braille's system about as well as Moon's readers in England, but not by any means as quickly as those who employ Lucas's type.

The following table may give some idea of the comparative merits of the various systems, when viewed in connection with the definition of which we have been treating,—No. 1 indicating the highest quality, and so on:—

TABLE.

	Certainty.	Ease.	Fluency.	Cheapness, and Smallness of Bulk.
1.	Moon.	Lucas.	Lucas.	Howe.
2.	Howe, Alston, etc.	Moon, Braille.	Frere.	Lucas.
3.	Lucas, Braille.	Frere, Howe, Alston.	Moon, Braille.	Alston, Frere, Braille.
4.	Frere.		Howe, Alston, etc.	Moon.

Of course it cannot be supposed that the qualities here attempted to be indicated are in any way equal in value. For cheapness, for instance, cannot be considered of equal importance to certainty; and so again, if the books in any system cannot be read, any other qualities they may contain are of no use whatever. Still, it is felt that the above table possesses some interest, and as such it is inserted here.

The best System of Reading for the Blind.

In considering the question of what arrangements are desirable to enable the blind to read with the greatest amount of certainty, ease, and fluency, and to supply them with books of the cheapest and most portable description, it is necessary thoroughly to comprehend the peculiarities of the agent by which the reading must be performed, viz. the sense of *feeling*, or *touch*. Touch differs from sight in many respects, but chiefly in this,—that while sight can take in at one glance many objects included within a vast area, *touch* can only convey to the brain by one act of contact the impression of the first small point that arrests its progress. To illustrate this statement with respect to sight is needless, but with regard to touch, the following example may serve to elucidate our meaning.

Let a small horizontal line be made in relief on a piece of paper, the person who wishes to feel it proceeds from the left side of the paper, quite unconscious of what may meet his finger; he presently comes in contact with a point, which fact with more than lightning-speed is conveyed to the brain. He then immediately proceeds along the line, and, far quicker than we can describe it, he comes to the extremity. Thus the act of feeling the smallest horizontal line involves the necessity of conveying to the brain, through the tactual nerve, at least three impressions, viz. contact, continuation, and conclusion. Now it is obvious, that if it were possible to convey to the brain a distinct idea of one special letter or word every time the finger came in contact with a point, 'tangible reading' would, under such circumstances, reach perfection; and if this desideratum cannot be fully attained, it must be admitted that the nearer we approach to its realization, the more likely we shall be to fulfil the task we have in view. Under these circumstances, therefore, although we cannot do all that could be wished, yet, as the present modes of printing in relief are radically defective, it is our duty to embody the results of experience by the formation of a system of reading which may give to the blind greater advantages than they now possess. The first thing is to select the most tangible characters, viz. those whose properties can be perceived immediately that the finger comes in contact with them; and with regard to this point, after a careful examination of more than thirty systems, extending over many years, we are enabled to state that in our opinion the characters possessing the greatest tangible power are the following:—

A dot at the top of the line, a dot at the bottom, two dots placed perpendicularly from the top of the line, two dots placed perpendicularly from the bottom, two dots placed perpendicularly, one at the top and the other at the bottom, three dots placed perpendi-

cularly, a short perpendicular line from the top, a short perpendicular line from the bottom, and a long perpendicular line.

The characters possessing second-class tangible power are:—A short perpendicular line with a dot above, a short perpendicular line with a dot below, a horizontal line at the top, a horizontal line at the bottom, a small solid circle at the top, a small solid circle at the bottom, two small circles placed perpendicularly, a semicircle to the left, a semicircle to the right, an oblique line to the left, an oblique line to the right, a semicircle at the top, and a semicircle at the bottom. We thus obtain twenty-two characters, and the additional number required to complete the alphabet and the figures, etc. are easily obtained by the use of curves and lines united, etc. They, however, possess inferior tangible power, and may be denominated third-class characters. Next to the importance of selecting the best characters is the solution of the question, how they shall be employed? And here we have to deal with this fact, that a very great disparity exists between the frequency with which the various letters of the alphabet are used, *e.g.*, in an ordinary book, the letter *e* is employed above sixty times more frequently than *z*, thirty times more than *j*, fifteen times more than *k*. The letters *t*, *a*, *i*, *n*, *o*, and *s* are used more than four times as often as *b*, *f*, *g*, and *p*, and more than twice as frequently as *c*, *m*, *d*, and *l*. Under these circumstances it is a matter of the highest importance to represent the letters which occur most frequently by characters possessing the greatest amount of tangible power, and which occupy the least space. Such an arrangement is presented in the foregoing description of characters, which we have employed for many years in making memoranda, and which we hope soon to offer to the blind generally, as the "*Tactual System of Relief Print.*"

Abbreviations.

It has been well said by Horne Tooke, that "Abbreviations are the wheels of language, the wings of Mercury, and though we might be dragged along without them, it would be with much difficulty, very heavily, and tediously."

If these observations be true with regard to abbreviations and their use by the sighted, with how much greater force do they apply to the blind, whose sense of touch is so limited in its exercise, as compared with the range possessed by the sense of sight!

Much has been said against abbreviations, which is chiefly owing to the misuse that has been made of them. All abbreviations should be definite, and never liable to change; one character or sign should never be used to indicate more than one thing, and nothing should be left to the discretion of an editor. With these conditions fulfilled, what can fairly be said against abbreviations? If it is understood that the letter *t* represents the word *the*, why should the reader be compelled to feel three letters instead of one, and to pay for the printing of that which is an injury to him rather than a benefit?

By the judicious use of fixed abbreviations, the ease and fluency of reading may be greatly promoted, and the price and bulk of books considerably reduced.

General Remarks on Reading.

Our system may possibly be opposed by some who may say, on reading the foregoing remarks, "This is all very well, but these are not the common letters." To such we would rejoin, that surely it must be admitted that whatever is intended to be perceived by a given sense should be adapted to the peculiar circumstances connected with that sense, and what may be suited to one sense may be very unfit for another; in

fact, if it be admitted, as we think it must, that each faculty given to man is designed by the Creator to perform its own special service, and that this service cannot be as well performed by any other faculty, it follows that whatever is best suited for one sense cannot be, in virtue of that suitability, equally well-adapted to another. Under these circumstances, and in view of the facts stated in other parts of this work, we entirely disregard the pretensions set up in favour of imposing the Roman alphabet on the blind to the exclusion of all others. We may, however, here express the opinion that children should be taught the common alphabet, in order that they may be enabled to understand, as far as possible, the means by which their sighted brethren read; may also have it in their power to decipher inscriptions on milestones, house-doors, tombstones, etc., and that they may be gradually prepared to employ the common letters in writing, but to do more than this in connection with the common alphabet is simply a waste of money and time. The Tactual System, recently explained, so fully meets all the requirements of the sense of touch, that by simply altering the spaces between the letters and the words, according as a book may be specially intended for those whose sense of feeling is keen, or for those in whom it is dull, the wants of the different classes of readers may be fully met.

Many persons advocate the use of a sharp embossment, but this is an error, as sharp print, although pleasant when any one first begins to read, becomes painful after the operation has been continued a short time; this, the author can vouch for by long experience, and he is informed by credible persons that when they have read a sharp embossment like Frere's, for some time, a stinging sensation occurs in the point of the finger, which gradually extends itself up the hand until it reaches the wrist; it is also stated, by a person who was in a school in the United States for some time, that

children have been known to read Howe's type until their fingers bled. This the writer would be disposed to doubt, if he had not himself read the same type until an abrasion of the skin of his finger had taken place. Others there are, who contend for thick lines being used in the formation of the letters, but this mode destroys clearness; in fact, it produces the same effect on the touch that thick print does on the sight, *i. e.* it is all blurs and blotches. The truth, however, is evolved by these extremes, viz. that the medium between sharpness and thickness is most desirable. The practice of reading alternately from left to right, and from right to left, existing in some systems, in addition to placing the letters in false positions, contains also these defects, viz., both hands cannot be advantageously employed,—the right, in feeling the word actually being pronounced, and the left, in ascertaining by anticipation what words are at the commencement of the next line, so as to enable the voice to utter them while the right hand is changing from one line to another, and thus preventing a break in the reading. We know that beginners often prefer the alternate lines, but so do sighted children large letters on black-boards. Everything that is worth learning is attended with some trouble, and that which is very easily acquired is seldom worth much.

To read with ease, it is necessary that sentences should be perceived by the fingers as fast as they can be comprehended by the mind, and uttered by the organs of speech.

To call that reading which does not give this power is a misuse of terms. It may be an amusement, a labour, or whatever else you will, but it certainly is not reading.

WRITING.

Of the importance of an acquirement which enables

the various members of society to communicate with each other at any distance of time and space, nothing need be said. But when any one's connection with the human family is weakened by the loss of such an important link in the social chain as that of sight, the value of the art of writing is immensely increased; and, accordingly, it is no matter of surprise to find that almost the first desire which animates an adult who has become hopelessly blind, is, that he may possess the power of communicating his feelings and wants to absent friends. To give some account of this branch of the science of providing for the wants of the blind, is, therefore, no unimportant part of our work. In 1692, the greatest mechanist of the day, Sir Samuel Morland, became blind; previous to which calamity he had invented the speaking-trumpet, and a calculating-machine, and had greatly improved the fire-engine, and also somewhat increased the knowledge of the power of steam. Although, after his loss of sight, which occurred when he was 67 years old, he was reduced to the deepest poverty and domestic trials, yet neither advanced age, extreme want, the desertion of his wife, nor blindness itself, could damp his ardour in the pursuit of knowledge. Being anxious to communicate with his friends, and there being then no means for enabling the blind to write, he set to work and invented an apparatus for that purpose; and it is a matter of considerable interest, as well for the philologist as for the antiquarian, that a letter is still extant, written by Sir Samuel Morland, nearly two hundred years ago, by the aid of this first writing appliance for the blind. The letter above named may be seen in the library of Lambeth Palace, where also an autobiography of Sir Samuel is deposited. During the three years of his blindness, Morland was principally supported by the benevolence of Archbishop Tenison, and an account of a visit of that prelate to our inventor, as given by Evelyn, who accompanied the Archbishop, possesses so much interest that it is here

transcribed. Evelyn, in his Diary, says, "On the 25th of October, 1695, the Archbishop and myself went to Hammersmith to visit Sir Samuel Morland, who was entirely blind, a very mortifying sight. He showed us his invention of writing, which was very ingenious. Also his wooden calendar, which instructed him all by feeling, and other pretty and useful inventions of mills, pumps, etc. And the pump he had erected that serves water to his garden and to passengers, with an inscription, and brings from a most filthy part of the Thames near it, a most perfect and pure water. He had newly buried £200 worth of music books, being, as he said, love songs and vanity. He plays himself psalms and religious hymns, on the 'theorbo'" (an instrument resembling the lute or guitar). The inscription to which Evelyn refers, was on a stone tablet fixed on the wall, and is said to be still preserved. The following is given as a copy:—"Sir Samuel Morland's Well, the use of which he freely gives to all persons, hoping that none who shall come after him will adventure to incur God's displeasure by denying a cup of cold water (provided at another's cost, and not their own) to either neighbour, stranger, passenger, or poor thirsty beggar. July 8, 1695."

Here we have the existence of the first drinking-fountain, which was the precursor of a system that now diffuses its benefits through the length and breadth of the land; and it should not be forgotten that it was a blind man who thus originated this beneficent scheme. After his loss of sight, Sir Samuel wrote a little work entitled 'The Urum of Conscience,' the burden of which was man's utter insignificance in view of the greatness of the Creator.

The death of Sir Samuel Morland occurred in 1695, when he had reached the age of threescore years and ten. Since the time of the sightless baronet who invented the first writing appliance for the blind, very many plans have been introduced to carry out the

same design, the number being greatly increased by the circumstance that, in the majority of cases, each inventor supposed himself to be the only labourer in the field. Some idea of the number of plans may be gathered from the fact that the author has himself used more than sixty different inventions for enabling the blind to write. The various appliances connected with the art of writing may be divided into three classes, viz., those which produce writing that can be read only by the sighted; those, the writing of which is intended only to be read by the blind; and those that produce writing capable of being read both by the sighted and by the blind. To the first of these three classes by far the greater number of the inventions belong, and the writing is effected either by a black-lead pencil on common paper, or by a stile, which presses carbonized paper upon white, similar to the action of the copying-press used in mercantile offices. The most typical, and best known of this class of inventions, are severally known as 'Haüy's,' or 'The French,' 'Wedgwood's,' 'Stidolph's,' and the writing-card. The method adopted by Haüy consisted in a number of cords being stretched across a wooden frame, so as to allow of writing being performed between every two of them, but no arrangement existed for the making of tall and tailed letters. Wedgwood's plan consists of a series of wires, between which the writing is effected either with a pencil or style. In the earlier frames the wires were fixed like those of a gridiron, but later they were attached to india-rubber, so that on pressure they yielded to allow the tails of the letters to be made. Stidolph's method, unlike that of Wedgwood's, instead of displaying a series of lines, has only one ruler, along which the pencil travels. The ruler is attached to springs to allow it to descend for the tails. Originally there was no guide for the tall letters, but at the suggestion of the author of these pages, a ruler with springs was put at the top of the line as well as at the bottom,

thus regulating every part of the letter. When a fresh line was required, the hand-guide containing the rulers was moved one degree downwards by means of pegs, which fitted into holes at each side of the frame, and which, by a very ingenious contrivance, were compelled always to form a straight line. The inventions by the late W. Hughes, of Manchester, and M. Focoult, of Paris, for enabling the blind to print the common letters, which can be read by sight, but cannot be felt, exhibit much ingenuity, but their costliness interferes greatly with their utility. The price of the apparatus by W. Hughes is six guineas, and that by M. Focoult about £2. The writing-card is by far the most efficient contrivance for pencil-writing, and it is produced at one-twentieth of the cost of any other appliance. The idea of this useful instrument was given to the author by a blind gentleman, F. Green, Esq., of the eminent ship-building firm of Blackwall, and it has been the means of enabling hundreds of persons to correspond with their friends, who would otherwise have been cut off from that inestimable privilege. Yea, more! in very many cases it has been the means of restoring hope to those who, having become blind, and being surrounded with poverty and the other attendant evils of loss of sight, were sinking lower and lower into the depths of helplessness and despondency. These persons, on finding that by the slightest effort of will they were enabled to return to their former habits of life in so important a matter as writing their own letters, began to think that, after all, their condition was not as bad as they had thought it, and that, at any rate, however bad it might be, they would make the best of it. For a description of the writing-card, and the method of using it, the reader is referred to the Appendix.

The appliances, the writing of which is intended only to be read by the blind, are several in number; the chief are those invented by Messrs. Braille, Carton,

Hughes, and Wood. The Braille method is exceedingly simple, the whole of the letters being made by the multiplication of a simple dot, to produce which an awl with a blunt point is employed. This awl is used to press the paper upon a metal tablet covered with horizontal grooves, three of which form a line; a tangible embossment is thus produced which may be applied either to literature or music. The position of the letters is regulated by a strip of metal placed horizontally upon the paper, covered with small holes of an oblong shape, each of which is calculated for the space of a letter. The strip contains two lines of holes, so that it has only to be moved down the frame every alternate line. Holes at the sides of the frame regulate the distance between the lines, as pins connected with the strip of metal fit into them as required. The letters of this system are not equidistant, as the same space is allowed for characters of different degrees of breadth. The want of variety in the surface of a page of reading is far from pleasing to the touch, and the absence of continuity produced by the letters being formed entirely of dots, tends to confuse the perception, and consequently produces hesitation and error. These remarks apply equally to the system of the Abbé Carton, which resembles the Braille method in everything, except that the alphabet bears some resemblance to the Roman letters, and that the writing-frame is chiefly of wood, and is often made small and sufficiently portable for the coat pocket. The frame by G. A. Hughes is intended to produce by hand the same characters as those employed in his system of reading, of which an account has been given in the article on printing. His frame is also used to emboss music.

The apparatus by W. Wood is for the production of Lucas's characters, which it effects with ease and speed, but both the methods of Hughes and Wood have now fallen into disuse. The prices were—

Hughes's apparatus, £2. 2*s*. and Wood's frame £1. 1*s*., while the cost of a Braille appliance is from one to five shillings, and that of Carton may be procured at the same rate. Many inventions have been introduced to effect writing capable of being deciphered both by the sighted and by the blind; but they all lack the essential quality of cheapness, without which any appliance, whatever its merits, might almost as well never have existed, as blindness and poverty are nearly synonymous.

The contrivances by a gentleman of Copenhagen, by a resident at Baltimore, U.S., by W. Hughes, and many others, contain various excellent qualities, but they are all surpassed in general utility by the method of pricking the common letters on paper by means of pins inserted into small pieces of wood. The earliest notice of this system occurs in connection with the biography of Mademoiselle de Salignac, who about the year 1760 was in the habit of writing to her friends by means of pricked letters, which she could detect with her fingers. This plan was also used by Weissemborg, of Mannheim, and by Mademoiselle de Paradis, of Vienna and Paris, about the year 1780. These facts, however, have not prevented several writers from claiming the invention as their own, amongst whom may be mentioned Klein of Vienna, Funk of Switzerland, and Alston of Glasgow. In 1851 (being painfully struck with the circumstance that neither at the International Exhibition of that year nor yet in all England could a blind person procure a cheap and efficient means of communicating with his friends in a way which would enable him to be sure that he had actually sent a letter, and had not forwarded a piece of paper which might or might not have received the marks of the pencil he had passed over it) the writer of these pages determined to utilize his experience by the production of a cheap and efficient writing-desk, and he so far succeeded that a

superior appliance was brought into the market for ten shillings to any that had been sold for one pound. For a description of this writing-desk the reader is referred to the Appendix.

Every blind man requires that, through the medium of writing, he should be enabled to communicate with the public at large,—should have the power of making his own memoranda, and should be in a position to sign bank checks and all kinds of legal documents.

For general correspondence pencil-writing is doubtless the easiest mode, and for those who have become blind after having arrived at man's estate it is invaluable. But in the case of persons who lost their sight in early life, and who in consequence have not become accustomed to the method of forming the common writing letters, it is desirable to employ a system which, while it enables them to communicate with the sighted, at the same time gives them the power of reading what they have written, in order that they may test its correctness. And here it may be remarked that it could be wished that those who became blind when adults should possess the same advantages as those who lost their sight in youth; but that experience shows that owing to the knowledge they obtained of the common writing letters when they could see, and in consequence of the comparative dulness of their touch, almost insuperable difficulties exist to the attainment of this object, and in consequence it is desirable that they should adopt pencil-writing, as it is better that they should write to their friends without being able to tell whether or not their letters are written correctly, rather than not write at all. To enable the blind to make memoranda, so as in any way to resemble the power enjoyed by the sighted, it is requisite that the method employed should be capable of being quickly written and easily read. It should

be so available at all times and places that, without having to seek any apparatus but what can be carried in the pocket without sensible increase of weight or bulk, a blind man may be enabled to record facts with as much facility as sighted stenographers. The system which approaches most nearly to this desideratum is one that has been employed by the writer for many years, and which he hopes soon to place at the disposal of the blind generally.

In signing checks and legal documents, the use of ink is absolutely necessary. In this matter those who could write before becoming blind experience very little difficulty; but with those who lost their sight in infancy the case is very different, for the most arduous achievement of many clever blind persons has been to perform the very simple office of signing their own names.

To remedy the defects connected with this subject, the author some years ago invented a pen-guide for the blind, which little instrument was the first of the kind ever introduced, and which will be fully explained in the Appendix.

Tangible writing copies are also described in the same part of this volume, and their value in connection with the pen-guide is far from inconsiderable.

How the seeing should write to the blind is a matter which has long occupied the attention of tuphlologists without receiving a satisfactory solution. Some persons have written with thick gum-water or viscid ink, and, after having traced a few words, have sprinkled the writing with fine sand or pounce, when, on drying the paper at the fire, a tolerable relief has been produced; others have used pounded sealing-wax, which, on being melted by the heat of a fire and afterwards allowed to cool, has produced lines much smoother than those formed by sand. Various attempts have been made to introduce a composition which could be applied by a pen and read with the finger as soon as

dry, and one of the most successful of these efforts is due to the persevering labours of Dr. Foules, of Edinburgh, who about the middle of the present century introduced a composition which he named "Tangible Ink."

All these attempts, however, have been far from satisfactory, as more care is required in the execution than can be given by an ordinary person who wishes to write a letter. The author has employed with considerable success a mixture of gum, flour, and water, which is applied to the paper by means of a small brush made of camel's hair or fitch; but this plan, although free from many of the objections connected with those before named, does not offer sufficient advantages for general adoption. The best mode that any sighted person can adopt in writing to the blind is to prick the letters with a pin on moderately thick paper of good quality; and should a regular correspondence be desired, a set of pin-type might be procured, which would be a great saving of time. The writer, however, should proceed in his operations from right to left, and should not remove one letter until the next is pressed upon the paper.

These stamps or type may be purchased without a frame for three shillings and sixpence, and their use is more fully described in the Appendix, in connection with the apparatus to enable the blind to write so that their letters may be read either by the blind or by the sighted.

Embossing common letters with a style has often been attempted, but with very little success, and, on the whole, pricked letters are to be preferred in corresponding with the blind.

ARITHMETIC AND ALGEBRA.

As it is usually found that the blind have a strong inclination to cultivate their reflective powers, it is by no means surprising to observe the fondness they generally display for arithmetical calculations. It is undoubted that under ordinary circumstances the practice of mental arithmetic should be especially encouraged, and that this mode of calculation is sufficient to meet the wants of the blind as a class. Nevertheless, there is evidence to show that in the more advanced branches of the science of arithmetic, persons without sight need the assistance of a slate, adapted to their wants, almost as much as those who are enabled to see, and we accordingly find that various efforts have been made to supply this necessity. The first known attempt to construct a tangible arithmetical apparatus was made by the great Saunderson, early in the eighteenth century, who, finding, doubtless, that the abstruse calculations in which he constantly engaged, made a great strain on his memory, devised an appliance which enabled him to perform and record all the operations connected with arithmetic and algebra; and as this contrivance was the parent of all that followed it, and as it was introduced by the greatest blind mathematician who ever lived, we shall proceed to give some explanation of its details, taken from the 'Encyclopædia Britannica' article "Blind:"—

"Imagine a square divided into four equal parts by perpendicular lines at the sides, in such a manner that it may present the nine points, 1, 2, 3, 4, 5, 6, 7, 8, 9. Suppose this square pierced with nine holes capable of receiving pins of two kinds, all of equal length and thickness, but some with heads a little larger than the others. The pins with large heads are never placed anywhere else but in the centre of the square; those

with smaller heads, never but at the sides, except in one single case, which is that of making the figure 1, where none are placed at the sides. The sign of 0 is made by placing a pin with a large head in the centre of the little square, without putting any other pin at the sides. The number 1 is represented by a pin with a small head placed in the centre of the square, without putting any other pin at the sides; the number 2, by a pin with a large head placed in the centre of the square, and by a pin with a small head placed on one of the sides; the number 3, by a pin with a large head placed in the centre of the square, and by a pin with a small head placed on one of the sides; the number 4, by a pin with a large head placed in the centre of the square, and by a pin with a small head placed on one of the sides; the number 5, by a pin with a large head placed in the centre of the square, and by a pin with a small head placed on one of the sides; the number 6, by a pin with a large head placed in the centre of the square, and by a pin with a small head placed on one of the sides; the number 7, by a pin with a large head placed in the centre of the square, and by a pin with a small head placed on one of the sides; the number 8, by a pin with a large head placed in the centre of the square, and by a pin with a small head placed on one of the sides; the number 9, by a pin with a large head placed in the centre of the square, and by a pin with a small head placed on one of the sides." Besides the appliance contrived by Saunderson, the writer is acquainted with twelve other inventions for the same object; in all of these, however, the figures and other signs are represented by pegs or pins (of wood, bone, or metal), being placed into holes in a board, or cushion, as required by the operator. In some cases the pegs employed have only a character or sign at one end, and in others both ends of the pegs are so employed; in some inventions also the holes in the board are square, in others pentagonal, and in others octangular; and in

some contrivances the figures are represented simply by common pins, with heads and sharp points, which are thrust in different positions into an ordinary pin-cushion. In general, a number of little boxes are attached to the board to receive the different kinds of pegs, which have to be carefully sorted into the boxes every time they have been used. In connection however, with the pentagonal and octangular systems, only one kind of peg is employed, and consequently no sorting is required. The pentagonal mode was adopted at Edinburgh and Glasgow, forty years since, and the octangular was invented by the Rev. W. Taylor about the year 1852. Whenever in any of the above inventions more characters are required for algebra, additional pegs are used.

As a detailed description of each of the methods of tangible arithmetic would be altogether superfluous, we will merely give as a sample the following explanation of the pentagonal system: "The board generally used is 16 inches by 12, and contains 400 pentagonal holes with a space of a quarter of an inch between each. The pin is simply a pentagon with a projection at one end on an angle, and on the other end on the side. Being placed in the board, with a corner projection to the left upper corner of the board, it represents 1; proceeding to the right upper corner it is 3; the next corner in succession is 5; the next 7, and the last 9. In like manner the side projection, by being turned to the sides of the hole progressively gives 2, 4, 6, 8, 0."

The writer having found that none of the contrivances to which reference has been made really gave to the blind what was desirable in a system of tangible arithmetic, constructed about the year 1860 an apparatus, which will be fully described in the Appendix, and of which it need only be said here that it is sold at half the price of any similar appliance giving anything like the same advantages. Before quitting this subject,

it may be as well to remark that very good common English figures may be made in gutta percha; the pegs themselves should be of gutta percha, and on each end should be a figure in relief. An arithmetical appliance on this plan was made by the writer some years ago, which was very useful in enabling a sighted nurse to instruct her blind charge in the first principles of calculation. The figures were half an inch deep and three-eighths wide, and the pegs were an inch long.

TANGIBLE MAPS AND GLOBES, ETC.

Various attempts have been made to form suitable maps for the blind, the earliest recorded effort being that of Herr Weissemborg, of Mannheim. This German gentleman having lost his sight when seven years old, and finding on reaching maturity no means provided for the education of the blind, set about contriving a number of appliances to carry out that object. Among these inventions were a writing-desk, the fundamental principle of which is still the basis of similar contrivances, and an arithmetical apparatus resembling, it is said, that by Saunderson. Herr Weissemborg also conceived the idea of forming tangible maps, for which purpose he availed himself of the embroiderer's art; the boundaries being represented by narrow lines of work, the mountains by thicker lines, and towns and cities by glass or steel beads of various sizes. These maps were moderately effective, but their costliness prevented their being widely used. Since 1780 many and varied have been the exertions made in almost every country in Europe and in the United States of America, to give the sightless a cheap and easy means of studying Physical Geography; but we regret to say that the results of these efforts have proved far from satisfactory. This want of success, however, has not been caused by any inherent difficulty in the case.

but has proceeded simply, as it would appear, from the caterers not sufficiently understanding the wants of the blind in connection with tangible maps, and the means best adapted to meet those wants.

Efficient tangible maps, in addition to possessing the indispensable requisite of cheapness, must also contain the following qualities:—the land and water must be readily distinguished from each other, the courses of rivers and mountains easily traced, and the situation and relative importance of towns accurately indicated; they should also be capable of being consulted by the blind student without sighted aid. The various maps invented naturally divide themselves into two classes, viz. those which are made by hand and those printed from relief plates. In the former class, besides those made by embroidery and needlework, may be mentioned such as are formed by having the shapes of countries, etc. cut out in wood, and such as are made by having the land of an ordinary map used by the sighted, pasted upon the land of another similar map, thus causing the whole surface of the land to be raised above the water, and also enabling a sighted person easily to teach the blind.

In these maps mountains and towns are shown by brass-headed pins of different sizes, which are put through the map and clinched at the back. Maps printed in relief from plates are necessarily much cheaper than those made by hand. In general the boundaries in printed maps are indicated by raised lines, and the towns marked by dots, no distinction being usually made between land and water. In those, however, printed by Dr. Howe, of Boston, U.S., the water is raised above the land, which injurious practice has been imitated by Mr. Moon, of Brighton, in some of his productions.

The idea of water being raised above land is so unnatural, that the mind never thoroughly becomes accustomed to it, and this produces constant irritation

and uncertainty in consulting maps so arranged. The maps invented by Haüy, and still used in France, are made by hand. They are expensive and very inefficient. Herr Zeune, the director of "The Institution for the Blind" at Berlin, invented some years ago maps of very perfect construction; the various elevations on the surface of the earth being given on a regularly graduated scale: thus, if land one thousand feet above the level of the sea is represented on the map by a substance the tenth of an inch thick, land which is ten thousand feet above the level of the sea is indicated by a substance of the thickness of an inch. The utility of this invention in the case of institutions, and for the use of pupils of the wealthy classes is undoubted, but the costliness of maps constructed on such a principle places the advantages of the system beyond the reach of the blind generally. The mode adopted by Herr Zeune is so admirable that it has been employed in common schools, and it forms perhaps the only instance in which an invention, originally intended for the blind, has proved of signal advantage to the sighted. A map of England and Wales containing many good points was issued some years ago by Mr. Alston, of Glasgow. In it the boundary lines of the various counties are given, the capital cities are indicated by square dots, and the towns by those of a round form. The initial letter of each county is also embossed, which is of great service, as it enables any one quickly to ascertain the name of the locality under examination. Mountains and rivers, however, are not clearly indicated, and the map would have been of more value if the relief had been higher, and if it had been accompanied by an embossed page of explanations; but although it has many defects, it is much to be regretted that it is now out of print, as it is certainly the best ever produced in this country. The maps sold by Mr. Moon, of Brighton, are of the most meagre description, and only deserve the name of out-

lines. The signs used for mountains, etc. are calculated to convey the most erroneous impressions. In America the philanthropic Dr. Howe, of Boston, has issued several atlases, which in many respects contain the best tangible maps yet produced. They, however, possess a few radical defects, which greatly interfere with their usefulness. The globes hitherto made for the blind are large and expensive, but tolerably efficient. They were executed by the best globe-makers of London and other large towns, and in general contain in a raised form the various signs and marks to be found in similar productions for the sighted; it is, however, much to be wished that portable globes were made for sale, which might be done cheaply and without much trouble. The writer has long desired to produce maps and globes possessing greater advantages than any now existing; but various engagements have compelled him to forego the gratification of his wishes, and devote himself to more immediate duties. He hopes, however, that the time may come when his anticipations may be fully realized.

Before quitting this subject it may be useful to name that whenever a tangible map is required that cannot be purchased, it may be made by taking an ordinary map as used by the sighted, and pricking the boundary lines very slightly with the point of a fine needle from the front to the back of the map, and then with a coarser needle pricking the same lines through from the back to the front. In this way very excellent maps may be produced, but it is a work of time and patience. Rivers may be shown by double pricked lines, towns by dots embossed from the back with a blunt instrument, and mountains by a succession of similar dots. The map chosen should be on a large scale, and if the initial letter of each locality is pricked in the proper place, it will be of great service to the pupil. The mariner's compass, introduced by the Rev. W. Taylor, and improved by the writer, will

be found very useful in connection with the study of geography.

Tangible orreries have been made with success at the School for the Blind, St. John's Wood, London, and at the Institution at Lausanne. The planets are represented by balls of different sizes, which are attached to rods working on pins, so as to represent the revolutions of the heavenly bodies.

MATHEMATICAL DIAGRAMS AND PICTURES.

Many attempts have been made to introduce embossed pictures, but as the perception of colour and distance are essential to the due appreciation of anything connected with the illustrative art, these attempts have proved utter failures. To persons blind from infancy lines embossed to indicate a bird, beast, or fish, simply give the idea of an intricate contrivance, which may mean anything you like to name. When the persons or things cannot themselves be felt, the blind require models or stuffed specimens, a good museum of which existed some years ago in connection with the Association for Promoting the General Welfare of the Blind, London, and it is much to be wished that every institution were supplied with a similar collection. The managers of the Association above-named were compelled to relinquish the museum for want of space, but they would be only too happy to have it in their power to reorganize the plan; and here we cannot help expressing surprise that no provision should be made for the blind in connection with the national and local museums of the country. Surely thirty thousand human beings are not the less to be cared for, because they have the misfortune of being blind. Of course, it has been supposed that articles displayed in ordinary museums are of no use to persons with-

out sight; this idea is altogether an error, for all stuffed objects, models, shells and specimens, connected with mineralogy, botany, etc. etc., may be examined by the blind with great advantage. No doubt the fear of injury to articles from being handled, has had something to do with the neglect of the blind in this matter, but we would venture to suggest that an official connected with the museum should be allowed to accompany blind visitors to afford information, and to see that no objects were examined that would suffer from being felt; and if it be too much to expect that these services should be gratuitously rendered, we might ask that the blind should be allowed to engage the aid of such an attendant by the payment of a small fee; but we are not fastidious about details, and only wish earnestly to recommend the subject to the attention of the national Government, and of all who take any interest in the management of museums. Since writing the above, it has been ascertained that at the Prussian town of Breslau the public museums are freely opened to the blind without any restriction whatever; and surely what the Germans do in this instance is worthy of imitation. At Vienna bas-relief figures of animals have been made in copper, but these specimens although superior to embossed pictures, as they are called, do not enable the blind to judge accurately of the things represented, as persons without sight require to examine all the details of an object, to arrive at a just appreciation of its form, and for this reason stuffed animals and models are to be preferred to all other modes of illustration. To form geometrical lines, Dr. Saunderson, the great blind mathematician, used to place pegs into holes in a board in different positions according to the figure he wished to describe, and then make the lines required by passing a piece of thread, or twine, round the various pegs, and this mode was also adopted in France by Haüy, and his immediate successors. In 1828, the late Rev. W. Taylor, then

Vicar of Bishop Burton, in Yorkshire, published in an embossed form the diagrams of the first book of Euclid's 'Elements of Geometry.' The figures in this work were formed by raised lines, and were lettered in the usual way, the only difference being that the characters were tangible instead of coloured. The plates for the work were indented, instead of being in relief, which required great pressure to be employed to squeeze the paper into the lines of the plate so as to produce an embossment, which was formed on the under instead of the upper surface of the paper. This attempt to print tangible diagrams was, it is believed, the first ever made; and the blind owe much to Mr. Taylor for this, and for many other efforts on their behalf continued throughout a period of more than half a century. It must be admitted, however, that the diagrams were far from satisfactory, owing to the fineness of the lines, which resulted from the peculiar mode of printing employed.

A volume of geometrical figures, beautifully raised, but badly lettered, was published at the Paris Institution in 1833, and various sets of diagrams, illustrative of different subjects have been issued in America, in all of which the lines forming the figures are too fine to be of general use. By far the best tangible diagrams yet issued, were embossed by W. Pumphrey, who, although a resident in York, is unconnected with the blind school of that city. This gentleman published in 1856 a volume containing the diagrams of the first six books of Euclid, the figures of which are beautifully raised and well developed, the only defect being that they are somewhat too large. The pages were printed from tin plates, on which were soldered the diagrams, and letters made in copper wire, being the same mode of stereotyping as that invented by Mr. Frere, and imitated by Mr. Moon and by the present writer.

Mr. Pumphrey's book was expensive, but this was chiefly caused by the smallness of the demand.

In preparing a volume of geometrical, or other figures, each diagram should be immediately followed by the explanation printed in relief; this arrangement would enable the student to acquire a knowledge of the science before him, without being compelled to avail himself of sighted aid, which is a matter of great importance, and one moreover entirely overlooked in the productions before named, which were published without the letterpress explanations. In making diagrams for private use, the figures may be pricked with a needle, or be made by means of a little wheel with sharp teeth, generally found in cases of drawing instruments. The latter is the quicker method, and answers very well for diagrams, but will not suit for maps and intricate figures. Diagrams may also be produced by gumming string upon cardboard in any form required, or by pressing thick cartridge paper upon a cloth or leather cushion, with an ivory pencil or other blunt instrument, so as to produce an embossment on the reverse side of the paper.

BIOGRAPHY.

Patriarchs, Monarchs, and Political Characters.

The Patriarch Isaac.

The first case of blindness recorded in history is that of Isaac, the Jewish patriarch. He was born 1896 B.C., and died at the age of 180. His life is fully given in the book of Genesis, chapters xxi. to xxviii., and chapter xxxv., verses 27 to 29. He lost his sight at an advanced age; and it is very remarkable to find that instead of his family devoting themselves to the alleviation of his misfortune, they took advantage of his blindness to impose upon him a cruel deception; and although Esau his eldest son did not share the crime of his brother Jacob, and Rebekah

his mother, yet he consulted his father's feelings so little, that he married into the very families that the God of his fathers had denounced for their wickedness, which was a grief of mind unto Isaac and to Rebekah. We cannot do better than transcribe here the beautiful account given by the inspired historian of the conspiracy of Rebekah and Jacob to deceive their aged and sightless husband and father; and we think the reader will be forcibly struck with the intelligent use made by Isaac of his hearing, touch, and smell, which is the more surprising as it might naturally be supposed that by reason of age these senses would have become almost useless. The sacred writer says,—"And it came to pass, that when Isaac was old, and his eyes were dim, so that he could not see, he called Esau his eldest son, and said unto him, My son: and he said unto him, Behold, *here am* I. And he said, Behold now, I am old, I know not the day of my death: Now therefore take, I pray thee, thy weapons, thy quiver, and thy bow, and go out to the field, and take me *some* venison; And make me savoury meat, such as I love, and bring *it* to me, that I may eat; that my soul may bless thee before I die. And Rebekah heard when Isaac spake to Esau his son. And Esau went to the field to hunt *for* venison, *and* to bring *it*. And Rebekah spake unto Jacob her son, saying, Behold, I heard thy father speak unto Esau thy brother, saying, Bring me venison, and make me savoury meat, that I may eat, and bless thee before the Lord before my death. Now therefore, my son, obey my voice according to that which I command thee. Go now to the flock, and fetch me from thence two good kids of the goats; and I will make them savoury meat for thy father, such as he loveth: And thou shalt bring *it* to thy father, that he may eat, and that he may bless thee before his death. And Jacob said to Rebekah his mother, Behold, Esau my brother *is* a hairy man, and I *am* a

smooth man: My father peradventure will feel me, and I shall seem to him as a deceiver; and I shall bring a curse upon me, and not a blessing. And his mother said unto him, Upon me *be* thy curse, my son: only obey my voice, and go fetch me *them*. And he went and fetched, and brought *them* to his mother: and his mother made savoury meat, such as his father loved. And Rebekah took goodly raiment of her eldest son Esau, which *were* with her in the house, and put them upon Jacob her younger son: And she put the skins of the kids of the goats upon his hands, and upon the smooth of his neck: And she gave the savoury meat, and the bread, which she had prepared into the hand of her son Jacob. And he came unto his father, and said, My father: and he said, Here *am* I; who *art* thou, my son? And Jacob said unto his father, I *am* Esau thy firstborn; I have done according as thou badest me: arise, I pray thee, sit and eat of my venison, that thy soul may bless me. And Isaac said unto his son, How *is it* that thou hast found *it* so quickly, my son? And he said, Because the Lord thy God brought *it* to me. And Isaac said unto Jacob, Come near, I pray thee, that I may feel thee, my son, whether thou *be* my very son Esau or not. And Jacob went near unto Isaac his father; and he felt him, and said, The voice *is* Jacob's voice, but the hands *are* the hands of Esau. And he discerned him not, because his hands were hairy, as his brother Esau's hands: so he blessed him. And he said, *Art* thou my very son Esau? and he said I *am*. And he said, Bring *it* near to me, and I will eat of my son's venison, that my soul may bless thee. And he brought *it* near to him, and he did eat: and he brought him wine, and he drank. And his father Isaac said unto him, Come near now, and kiss me, my son. And he came near, and kissed him: and he smelled the smell of his raiment, and blessed him, and said, See, the

smell of my son *is* as the smell of a field which the Lord hath blessed: Therefore God give thee of the dew of heaven, and the fatness of the earth, and plenty of corn and wine: Let people serve thee, and nations bow down to thee: be lord over thy brethren, and let thy mother's sons bow down to thee; cursed *be* every one that curseth thee, and blessed *be* he that blesseth thee. And it came to pass, as soon as Isaac had made an end of blessing Jacob, and Jacob was yet scarce gone out from the presence of Isaac his father, that Esau his brother came in from his hunting. And he also had made savoury meat, and brought it unto his father, and said unto his father, Let my father arise, and eat of his son's venison, that thy soul may bless me. And Isaac his father said unto him, Who *art* thou? And he said, I *am* thy son, thy firstborn Esau. And Isaac trembled very exceedingly, and said, Who? where *is* he that hath taken venison, and brought *it* me, and I have eaten of all before thou camest and have blessed him? yea, *and* he shall be blessed. And when Esau heard the words of his father, he cried with a great and exceeding bitter cry, and said unto his father, Bless me, *even* me also, O my father. And he said, Thy brother came with subtilty, and hath taken away thy blessing. And he said, is not he rightly named Jacob? for he hath supplanted me these two times; he took away my birthright; and, behold, now he hath taken away my blessing. And he said, Hast thou not reserved a blessing for me? And Isaac answered and said unto Esau, Behold, I have made him thy lord, and all his brethren have I given to him for servants; and with corn and wine have I sustained him; and what shall I do now unto thee, my son? And Esau said unto his father, Hast thou but one blessing, my father? bless me, *even* me also, O my father. And Esau lifted up his voice and wept. And Isaac, his father, answered and said unto him,

Behold, thy dwelling shall be the fatness of the earth, and of the dew of heaven from above; and by thy sword shalt thou live, and shalt serve thy brother; and it shall come to pass when thou shalt have the dominion, that thou shalt break his yoke from off thy neck. And Esau hated Jacob because of the blessing wherewith his father blessed him; and Esau said in his heart, The days of mourning for my father are at hand; then will I slay my brother Jacob." (Gen. xxvii. 1 to 41.)

It is no part of the design of this work to dilate on the way in which Rebekah and Jacob were punished for their sin, or to enlarge on the reason why God allowed the conspiracy to succeed, but we cannot refrain from observing that the wonderful sagacity shown by Isaac would appear to have been almost sufficient under ordinary circumstances to have discovered the fraud, had not the omniscient Deity permitted the evil, and to the caviller we can only say that God is his own interpreter, and to the honest prayerful inquirer "*he will make it plain.*"

Samson.

This celebrated champion and judge of the Israelites flourished in the twelfth century before Christ. He was the son of Manoah, of the tribe of Dan. Before his birth instructions were given to his parents by an angel of the Lord that he should be specially devoted to God's service, by being brought up as a Nazarite, according to which it was commanded that: No razor should come on his head, and it was foretold that he should "Begin to deliver Israel out of the hand of the Philistines," which statement must have been particularly welcome to Manoah and his wife, as the Philistines had then oppressed the children of Israel for a period of forty years. Samson soon gave proof of great courage and bodily strength, and after having

performed unheard-of prodigies, allowed himself to be deceived by Delilah, a fair Philistine, who succeeded in obtaining from him the secret of wherein his great strength lay. This circumstance is thus recorded in Holy Writ:—"And it came to pass, when she pressed him daily with her words, and urged him, so that his soul was vexed unto death; That he told her all his heart, and said unto her, There hath not come a razor upon mine head: for I *have been* a Nazarite unto God from my mother's womb: if I be shaven, then my strength will go from me, and I shall become weak, and be like any *other* man. And when Delilah saw that he had told her all his heart, she sent and called for the lords of the Philistines, saying, 'Come up this once, for he hath shewed me all his heart.' Then the lords of the Philistines came up unto her, and brought money in their hand. And she made him sleep upon her knees; and she called for a man, and she caused him to shave off the seven locks of his head, and she began to afflict him, and his strength went from him. And she said: The Philistines be upon thee, Samson. And he awoke out of his sleep, and said, I will go out as at other times before, and shake myself. And he wist not that the Lord was departed from him. But the Philistines took him, and *put out his eyes*, and brought him down to Gaza, and bound him with fetters of brass; and he did grind in the prison house." (Judges xvi. 16–21.) Thus we see the physically strongest man ever known reduced to the condition of a sightless slave by loving woman more than God. How long Samson lived after his blindness does not appear, but the reflections of one in his position have been happily rendered by the great Milton, in his 'Samson Agonistes,' *i.e.* Samson the actor, or one who contends for the prize in public games, which was published in 1671. It is also somewhat singular that Handel, who became blind late in life, composed the Oratorio of 'Samson' in 1742.

Milton, himself blind, in his 'Samson Agonistes,' thus describes the reflections of Samson under his accumulated woes:—

Samson's Attendant leading him.

"A little onward lend thy guiding hand
To these dark steps, a little further on;
For yonder bank hath choice of sun or shade,
There I am wont to sit when any chance
Relieves me from my task of servile toil,
Daily in the common prison else enjoined me,
Where I a pris'ner chain'd, scarce freely draw
The air imprison'd also, close and damp,
Unwholesome draught; but here I feel amends,
The breath of Heav'n fresh blowing, pure and sweet,
With day-spring born; here leave me to respire.
This day a solemn feast the people hold
To *Dagon* their sea-idol, and forbid.
Laborious works, unwillingly this rest
Their superstition yields me; hence with leave
Retiring from the popular noise, I seek
This unfrequented place to find some ease,
Ease to the body some, none to the mind
From restless thoughts, that like a deadly swarm
Of hornets arm'd, no sooner found alone,
But rush upon me thronging, and present
Times past, what once I was, and what am now.
O wherefore was my birth from heaven foretold
Twice by an angel; who at last in sight
Of both my parents all in flames ascended
From off the altar, where an offering burn'd,
As in a fiery column charioting
His God-like presence, and from some great act
Or benefit revealed to *Abraham's* race?
Why was my breeding order'd and prescrib'd
As of a person separate to God,
Design'd for great exploits; if I must die
Betray'd, captiv'd, and both my eyes put out,
Made of my enemies the scorn and gaze;
To grind in brazen fetters under task
With this heaven-gifted strength? O glorious strength,
Put to the labour of a beast, debased
Lower than bond-slave; Promise was that I
Should *Israel* from Philistian yoke deliver;
Ask for this great deliverer now, and find him
Eyeless in *Gaza* at the mill with slaves,
Himself in bonds under *Philistian* yoke;
Yet stay, let me not rashly call in doubt
Divine prediction: what if all foretold
Had been fulfill'd but through mine own default,

Whom have I to complain of but myself?
Who this high gift of strength committed to me,
In what part lodged, how easily bereft me,
Under the seal of silence could not keep,
But weakly to a woman must reveal it
O'ercome with importunity and tears,
O impotence of mind in body strong!
But what is strength without a double share
Of wisdom, vast, unwieldy, burdensome,
Proudly secure, yet liable to fall
By weakest subtleties, not made to rule,
But to subserve where wisdom bears command?
God when he gave me strength, to show withal
How slight the gift was, hung in it my hair.
But peace, I must not quarrel with the will
Of highest dispensation, which herein
Haply had ends above my reach to know:
Suffices that to me strength is my bane,
And proves the source of all my miseries;
So many, and so huge, that each apart
Would ask a life to wail, but chief of all,
O loss of sight, of thee I most complain!
Blind among enemies, O worse than chains,
Dungeon, or beggary, or decrepit age!
Light, the prime work of God, to me is extinct.
And all her various objects of delight
Annull'd, which might in part my grief have eased,
Inferior to the vilest now become
Of man or worm; the vilest here excel me.
They creep, yet see, I dark in light, expos'd
To daily fraud, contempt, abuse and wrong,
Within doors, or without, still as a fool.
In pow'r of others, never in my own;
Scarce half I seem to live, dead more than half.
O dark, dark, dark, amid the blaze of noon,
Irrecov'rably dark, total eclipse
Without all hope of day!
O first created beam, and thou great Word,
Let there be light, and light was over all;
Why am I thus bereav'd thy prime decree?
The sun to me is dark
And silent as the moon,
When she deserts the night
Hid in her vacant interlunar cave.
Since light so necessary is to life,
And almost life itself, if it be true
That light is in the soul,
She all in ev'ry part; why was this sight
To such a tender ball as the eye confined?
So obvious and so easy to be quench'd,

And not as feeling through all parts diffus'd,
That she might look at will through every pore?
Then had I not been thus exiled from light,
As in the land of darkness, yet in light,
To live a life half dead, a living death.
And buried; but, O yet more miserable!
My self my sepulchre, a moving grave,
Buried, yet not exempt,
By privilege of death and burial,
From worst of other evils, pains and wrongs,
But made hereby obnoxious more
To all the miseries of life,
Life in captivity
Among inhuman foes."

It is very probable that Samson did not continue long in this deplorable condition, but to one in his circumstances days were years. The closing events of his life are thus related:—

"Howbeit the hair of his head began to grow again after he was shaven. Then the lords of the Philistines gathered them together for to offer a great sacrifice unto Dagon, their god, and to rejoice: for they said Our god hath delivered Samson our enemy into our hand. And when the people saw him: they praised their god for they said, Our God hath delivered into our hands our enemy, and the destroyer of our country, which slew many of us. And it came to pass, when their hearts were merry, that they said, Call for Samson, that he may make us sport. And they called for Samson out of the prison-house; and he made them sport: and they set him between the pillars. And Samson said unto the lad that held him by the hand, Suffer me that I may feel the pillars whereupon the house standeth, that I may lean upon them. Now the house was full of men and women; and all the lords of the Philistines *were* there; and *there were* upon the roof about three thousand men and women, that beheld while Samson made sport. And Samson called unto the Lord, and said, O Lord God, remember me, I pray thee, and strengthen me I pray thee, only this once, O God, that I may be at

once avenged of the Philistines for my two eyes. And Samson took hold of the two middle pillars upon which the house stood, and on which it was borne up, of the one with his right hand, and of the other with his left. And Samson said let me die with the Philistines. And he bowed himself with *all his* might; and the house fell upon the lords, and upon all the people that *were* therein. So the dead which he slew at his death were more than *they* which he slew in his life. Then his brethren and all the house of his father came down, and took him, and brought *him* up, and buried him between Zorah and Eshtaol in the buryingplace of Manoah his father. And he judged Israel twenty years." (Judges xvi. 22–31.)

Thus fell Samson at the moment of his greatest triumph, and it is well worthy of notice in connection with this subject that the greatest number of persons ever destroyed at one time by a single individual were slain by a blind man.

Timoleon.

Timoleon, one of the greatest generals and patriots of Greece, was born of noble parents at the city of Corinth about the year 410 B.C. After having greatly distinguished himself in his own country and, at the head of a small body of Corinthians, overthrown Dionysius, Tyrant of Syracuse, in Sicily, and also performed many other acts of valour and wisdom,—he became blind, as it would appear, from old age. Although deprived of sight, such confidence had the people of Syracuse in the judgment and probity of Timoleon that they never dispatched any business without obtaining his opinion, and his appearance in public was always greeted with rapturous applause. He died at Syracuse, B.C. 337, at the age of 73, and was taken to the ground "where stood the palace and citadel of Dionysius, before they were demolished by Timoleon."

"Several thousand men and women, crowned with flowers and dressed in white, attended on the solemnity; whose tears and lamentations mingled with their praises of the deceased, plainly expressed their love and gratitude. At length, the bier being placed on the funeral pile, and that being kindled to consume his corpse, *Demetrius*, one of the criers, distinguished by the loudness of his voice, read an edict to the following purpose: "'The people of *Syracuse* have decreed to inter *Timoleon*, the son of *Timodemus*, at the common expense of 200 minæ, and perpetually to honour his memory by games, to be celebrated by music, horse-races, and all sorts of gymnastic exercises; in honour of his having destroyed tyrants, overthrown the barbarians, repeopled many great cities that were before ruinous and desolate, and his restoring the *Sicilians* the privilege of living under their own laws.' The people also erected a tomb for him in the market-place, which they afterwards surrounded with a portico, and joining other buildings to it, rendered it a place of exercise for the youth of the city of Syracuse, giving it the name of Timoleonteum, and in maintaining the form of civil polity, and the laws Timoleon had established, the Sicilians long enjoyed great prosperity."

This hero was so highly honoured that his birthday was kept as a public festival; and after his death the value of his life was soon proved by the anarchy which began to spread, and the unruly spirits who obtained the supremacy in Syracuse.

Aufidius.

The illustrious person whose name heads this brief account was probably the first blind man who took part in a national legislature. We find that he was a Roman senator, and was remarkable even in the august assembly of which he was a member, for his great

abilities. He lost his sight in youth, so that the proud distinction he occupied was not in any way due to services rendered to the State during the time that he possessed the advantages of sight. He wrote a Greek history which is spoken of with approbation.

It is much to be regretted that more is not known of his character; but what is recorded is sufficient to place the name of Aufidius among those who have led in the van of hopeful advancement for the blind.

A Welsh Prince.

Before proceeding to the consideration of various kings, etc. who exercised the offices of government with credit and ability while deprived of sight, we will narrate an anecdote connected with the prince of Cambria's ancient race.

Miss Catherine Sinclair, in her sketches and stories of "Wales and the Welsh," says, "An ancient prince of Wales was long and cruelly imprisoned within the walls of Dynevor Castle by his own son, a chief with an unspellable name, and indeed the name of so odious a tyrant should neither be written nor remembered. He put out the eyes of a brother who had excited jealousy by superior attainments, and confined him also in a solitary cell within the castle. This unfortunate youth, knowing every winding and turning in the edifice, groped his way to the dungeon of his injured father, and by an effort of prodigious strength broke the door open, unloosed the aged prince's chains, and conducted him to light and liberty."

Bela the Second, King of Hungary, and his father, Prince Almos.

Coloman, king of Hungary, after long intrigues with his brother Almos, deprived both him and his son Bela of sight. Coloman died about the year 1114 A.D., and was succeeded by his son Stephen the Second, who banished

his blind uncle. Almos, after his expulsion from Hungary, took refuge in Macedonia, where he was cordially received by the Greeks and lived many years in dignified retirement, affording shelter and hospitality to all those of his countrymen whom the displeasure of Stephen had driven from their native land. As Stephen had no children, he adopted his cousin Bela as his heir, who ascended the Hungarian throne A.D. 1131. Bela, though blind, proved himself a man of signal ability. He incorporated Bosnia with Hungary, and expelled the Venetians from many seaports on the Adriatic, of which they had taken possession during the late king's reign. He also succeeded in suppressing a combination formed against him by the Poles and Russians, through the machinations of Borick, an illegitimate son of the late king. Bela died in 1141, after a reign of ten years, leaving four sons, Geysa, Ladislaus, Stephen, and Almos; the eldest of whom succeeded him under the title of Geysa the Second. It is much to be regretted that the rudeness of the age in which King Bela lived, prevented fuller details of his beneficent reign being handed down to us; enough, however, is known to show that few monarchs ever excelled him in political wisdom, and that it is probable that none of his contemporaries could vie with him in the art of government. When it is considered that he reigned in the twelfth century, over a turbulent people, surrounded by powerful and hostile nations, and that nothing is recorded of his administration but uninterrupted success at home and abroad, the present generation may well be thankful that Bela the Second, the blind king of Hungary, ever lived to be an example to mankind. From him the blind may learn that loss of sight does not incapacitate those afflicted by it for the attainment of the highest positions, and the accomplishment of the most difficult tasks; and the sighted may feel confident that in giving free scope to the blind for the exercise

of their faculties in every walk of life, and by stretching out a helping hand to those who enjoy fewer blessings than themselves, they not only do their duty as men and as Christians, but also aid much in bringing useful powers both of body and mind into beneficial exercise for the public good; and although all blind men cannot expect to be as great as King Bela, yet all may and ought to be usefully employed in the station of society in which their lot is cast.

Dandolo, Doge of Venice, and Prince of Romania.

Enrico Dandolo was born A.D. 1108. He was descended from a patrician family, and was elected doge or duke of the Venetian republic in 1192, his merits being such that neither his blindness nor the advanced age of eighty-four were considered by his fellow-citizens sufficient to prevent his becoming their chief magistrate and the commander of their armies and fleets; and the sequel fully justified their choice, for not only did the blind and aged doge prevent the decay of the State, but he it was who laid the foundation of the maritime greatness which so long gave lustre to the Venetian name.

Dandolo when young visited Constantinople, where, on suspicion of being a spy, he was arrested by the Emperor Emanuel Comnenus, and after the manner of the age deprived of sight by having a basin of hot brass held before his eyes; this punishment, although it did not deprive him of the power of perceiving light, yet rendered him so far blind that he could not discern objects. The inhabitants of Constantinople, however, eventually found to their cost that although blindness might prevent a man being a spy, yet it could not hinder him from being a great commander and legislator.

In the year 1201 the French crusaders applied to the Venetian senate for assistance in their expedition to

Palestine. Dandolo warmly supported their petition, lent them money, provisions, and ships, and stipulated in return that they should assist him in conquering the town of Zara, on the Adriatic, which had revolted from its allegiance to the republic.

Dandolo embarked in the admiral's ship, and having taken Zara, he gladly listened to the prayers of Alexis, the *son of Isaac Angelus*, the deposed and blinded emperor of the East, and determined to turn the arms of the Crusaders against Constantinople, but although the chiefs of the expedition were easily converted to the enterprise, it was not found an easy task to convince the soldiery that having undertaken to deliver the Holy Land from the power of the infidel, it was right for them to give up the attempt in order that they might make war on their fellow-Christians; but Dandolo overcame every obstacle, and although a feud broke out between the French and Venetians, which caused much blood to be spilled, the admiral arrived at length before Constantinople at the head of five hundred large ships; and a proportionate number of troops. The entrance to the harbour was found to be barred by an immense chain; but for this Dandolo was prepared, for a Venetian galley with a pair of shears of enormous power soon divided the chain, and allowed the whole fleet to enter. Constantinople was stormed, and the first man to leap on shore, and to plant the standard of Venice on its ramparts was that very Dandolo, who seventy or eighty years before had been deprived of sight in the same city. Isaac Angelus was now taken from prison and restored to the throne, and the unexampled spectacle was exhibited of a blind general reinstating a blind emperor in the government of his dominions.

On the death of Isaac Angelus the imperial crown was offered to Dandolo, but with almost unprecedented humility he persistently declined it. He was, however, prevailed on to accept the principality of Romania, in

which country he reigned for the remainder of his life under the title of "Despot." This remarkable man died in 1205 at the advanced age of ninety-seven; his name is still cherished as one of the greatest benefactors of his country, and surely the blind, of whatever nation they may be, will never forget him.

Isaac Angelus, Emperor of Constantinople and the East.

Little is known of this potentate, and that little is not at all to his honour. Many of the characters described in these pages are remarkable for transcendent virtue and ability, but this prince seems only noted for barbarities of the worst kind, and we should certainly not deem his life worth recording if it were not desirable to make known that blindness was not considered a disqualification for an imperial throne in the twelfth century.

In A.D. 1185, Andronicus Comnenus, emperor of Constantinople, being apprehensive of treachery on the part of Isaac Angelus, one of his influential subjects, sent Hagio-Christophorites to put him to death, but Isaac succeeded in killing the would be-assasin. The people rose in arms, seized and tortured Andronicus to death, and the same day proclaimed Isaac emperor. It is remarkable to find it recorded that the fate of Andronicus was foretold a short time before by a blind astrologer named Seth.

A little anecdote throws some light on the age of Isaac when raised to the imperial purple :—

"One or two elderly men at this time aspired to the Byzantine empire which was elective, but the populace exclaimed 'No!' we will have no more bald heads, we have been plagued enough by grey hairs."

The Emperor Isaac was soon engaged in war with the Turks, who then occupied a considerable part of what had once been the Asiatic possessions of the

Eastern empire. Incredible as it may seem, it is yet recorded by grave historians, whose veracity is not questioned by so good an authority as Andrews, that hitherto Isaac had only sent out as commanders against the enemies of the country, officers who had lost their eyes by the barbarity of Andronicus. These veterans were subject to unlucky mistakes, one of them (John Cantacuzenus, a man of real valour), being attacked in the night, mounted his horse, and meaning to face the foe galloped right away from them, all the while calling his men poltroons and cowards for not following him.

By sea the imperial fleet sent against Isaac Comnenus, who had usurped the dominion of Cyprus, was defeated by Margarites, a celebrated pirate.

The Bulgarians having rebelled, the emperor sent against them Alexis Branas, one of his best generals. Alexis, although lately pardoned for treason, yet once more threw off his allegiance, claimed the imperial purple, and laid siege to Constantinople. He was however slain by Conrad of Montserrat, who had espoused the cause of Isaac. About the year 1189 the emperor was much engaged in suppressing various rebellions, which was often done by the practice of the most hideous treachery. The correspondence of Isaac with Frederick Barbarossa and with Richard Cœur de Lion is still extant, and it is amusing to observe the terms of greeting between these potentates. Isaac only styles Richard, "Your nobility," although Frederick Barbarossa addressed him as "His dearest brother, the illustrious King of England." Isaac refuses to Frederick the title of emperor, and Frederick calls Isaac 'a dog.' Although Isaac should have done everything in his power to assist the Crusaders, yet he used every art that perfidy and treachery could dictate to frustrate their enterprise. He was generally despised by his own subjects, but although many revolts were initiated against him for a long time, none met with success;

each candidate for the empire, when captured, was punished by being deprived of sight. At length the doom of the tyrant came, and that too from a quarter least expected. His brother Alexis, to whom he had ever been most indulgent, formed a plot, deposed him and put out his eyes. A.D. 1195. After eight years' captivity he was released from prison, and again placed on the throne by blind old Dandolo and the Crusaders. His misfortunes, however, had not taught him wisdom; and his odious conduct so exasperated the people that ere a year had passed, he was deposed and put to death by Alexis Ducas. Before ending this sketch, we must direct attention to the strange connection that existed between the Emperor Isaac Angelus and the blind. The fate of his imperial predecessor was foretold by a blind astrologer. He gave the command of his armies to blind generals, he blinded those who rebelled against his authority, was himself dethroned and blinded by his own brother, and was restored to his throne by blind old Dandolo.

Theodore, Emperor of Epirus.

Although very little is known of the prince whose name stands at the head of this article, yet, as he occupied a throne as a blind man, it is felt that some notice of him in these pages is indispensable.

When Constantinople was taken by the Franks in 1204, various adventurers seized on portions of the Eastern empire; among these was a Greek named Theodore, who possessed himself of Epirus, assumed the title of emperor, and having conquered several places, among which was Thessalonica, he was at length defeated and deprived of sight by Asan of Bulgaria. Strange as it may appear, it is nevertheless recorded that Asan subsequently released Theodore, restored him to his throne, and married his daughter. All that is further known of the history of Theodore is,

that in 1251 John Vateces, Emperor of the East, defeated the Epirotes, and obliged them to surrender the greater part of their dominions, and to deliver up the old and blinded Theodore. The character given of this prince by his contemporaries is far from good, as whenever his name is mentioned he is spoken of as the "treacherous Theodore."

John, King of Bohemia.

John, Count of Luxemburg, became King of Bohemia by the election of the nobles of that country in 1310. Much of his reign was passed in conflicts with the Emperor of Germany and with the Pope. Sometimes he was the ally of the one and sometimes of the other, but wherever he turned his arms, victory was the result. John married Margaret Maultasche (*i.e.* with the ugly mouth), Princess of Carinthia, and mortal enmity was created between him and Lewis, Emperor of Germany, by the lessening of the dower which the emperor had promised to give with the princess. Margaret procured a divorce by the connivance of the Pope, and immediately married Lewis the Elector of Brandenburg, son of the emperor, which added fresh fuel to the war then raging. For some years before the separation from his wife, it would appear that John had been blind, but this by no means impaired his judgment or lessened his success in war. Various triumphs attended his arms, and in 1342 Silesia was made a province of Bohemia. John, being in alliance with the King of France, assisted him in his wars with the English, and was present at the memorable battle of Cressy, August 25, 1346. How gloriously he fought and fell is thus related in Wilson's 'Biography of the Blind,' which account the author states he took from Barnes's 'Life of Edward III.' The writer says, "When he understood how the day was like to go, he asked of his captains what was become of the Lord

Charles, his son; they told him they knew not, but that they supposed him somewhere in the heat of action. Then the good old king, resolving by no means to disgrace his former victories, or to cancel the glory of his youth by a degenerate old age, said unto them: 'Gentlemen, you are men, my companions and friends in this expedition, I only now desire this last piece of service from you, that you will bring me forward so near to these Englishmen that I may deal among them one good stroke with my sword.' They all said, they would obey him to the death, and lest by any extremity they should be separated from him, they all, with one consent, tied the reins of their horses one to another, and so attended their royal master into battle. There this valiant old hero had his desire, and came boldly up to the Prince of Wales, and gave more than one, four, or five good strokes, and fought courageously, as also did all his lords, and others about him; but they engaged themselves so far, that they were all slain, and next day found dead about the body of their king, and their horses' bridles tied together. Then were the arms of that noble king (being the ostrich feathers with the motto, 'Ich Dien,' signifying, I serve,) taken and worn by the Prince of Wales, in whose memory they have been ever since called the Prince's arms; being also from that time worn by his successors, the Princes of Wales, eldest sons of the Kings of England." Thus died as noble and true-hearted a prince as ever sat on a throne, his last act denying the accusation of impuissance falsely made against him by his debased wife; and we cannot forbear expressing the hope that England may never want a prince who lacks the virtues and courage of the blind king who once owned and defended with his life the arms and motto now borne by our Princes of Wales.

Ziska, the Bohemian General and Reformer.

This celebrated patriot was born about the year 1380; he was descended from one of the noblest families of Bohemia, and received his education in the palace and camp of Wenceslaus, king of that country, and at the court of the Emperor of Germany. His real name was John Trocznow or Trosnow, but having served in the Polish and Danish wars, he lost an eye in battle, from which circumstance he received the name of Ziska, or "the one-eyed."

"Like the greater number of his countrymen, he embraced the tenets of John Huss; and when that reformer and Jerome of Prague were cruelly and perfidiously put to death by a decree of the Council of Constance, the Bohemians flew to arms to revenge their leader's martyrdom, and to protect themselves from the persecution with which they were menaced by the bigotry and tyranny of the Emperor Sigismund. They elected John Ziska their general, and in a few months he raised and disciplined a formidable army, and organized a war of independence throughout Bohemia." At the commencement of these troubles Wenceslaus, the weak-minded king, died, and the government of the country being an elective monarchy, the evils of religious commotions were increased by the absence of social order, owing to the want of a chief in the state. Sigismund, the German emperor (being lord paramount of Bohemia, and encouraged by a bull of Pope Martin the Fifth to enter on a crusade against the Hussites), assumed the right of regulating the internal affairs of the country, and of dictating to the people their religious faith. Zisca, or Ziska, however, soon found himself at the head of 40,000 men, and the emperor having invaded Bohemia, and laid siege to Prague, Ziska, being in possession of the castle, attacked and utterly defeated Sigismund, 11th July, 1420. Negotiations and a tem-

porary pacification followed; but the war soon broke out afresh with redoubled violence, each side being exasperated by religious fanaticism, and thirst for retaliation for deeds of atrocious cruelty. Ziska was everywhere victorious. He invaded Austria and Hungary, and lost his remaining eye at the siege of Raab, or Rubi. He subsequently built the town of Tabor in a strong position in the south-east of Bohemia, and rebuilt the castle, which had lain in ruins for several centuries. The connection of the Hussites with this place caused many of them to be styled Taborites. The town still exists, and has a population of 4500 souls, with more than a usual proportion of Jews. The way in which Ziska became totally blind is thus described in Bohemian history:—"He had reduced the town of Rahab to extremities, when, as he was viewing a part of the works where he intended an assault, an arrow, shot from the wall, struck him in his remaining eye. The wound being thought dangerous, the surgeons of the army proposed his being carried to Prague, where he might have the best advice; in reality, however, they were afraid of being cut to pieces by the troops, if he should die under their hands. When his removal to the capital was resolved on, it was difficult to check the contest among the soldiers, who strove for the honour of carrying their wounded general. At Prague the arrow was extracted, which, being barbed, tore out the eye with it, and it was feared that the fever which succeeded would prove fatal; his life, however, though with difficulty, was saved. By this severe stroke he was condemned to total darkness for the remainder of his life, but the sequel proved that, like Samson, he was more destructive to the enemies of his country after than before his blindness." The friends of Ziska were surprised to hear him talk, after his recovery, of setting out for the army, and did what was in their power to dissuade him from that course, but he continued reso-

lute. "I have yet," said he, "my blood to shed for the liberties of Bohemia. She is enslaved; her sons are deprived of their natural rights, and are the victims of a system of spiritual tyranny, as degrading to the character of man as it is destructive of every moral principle, therefore Bohemia must and shall be free." Ziska was so beloved by the army that the soldiers threatened to lay down their arms unless their general were restored. In the meantime, the Emperor Sigismund had been making preparations for war at Nuremberg, where he assembled the states of the empire in full convention, opened to them his embarrassed circumstances, and entreated them, for the sake of their sovereign, the honour of the empire, and in the cause of religion, to take up arms. His harangue had its effect, proper measures were concerted, the assembly broke up with a unanimous resolution to make the audacious rebels feel the full weight of the power of the empire; and that the blow might fall more unexpectedly, it was resolved to defer operations until the end of the year, when it was hoped that Ziska might more easily be surprised, as great part of his troops left him in the winter and returned again in spring. The campaign, as Ziska imagined, being over, he was alarmed by the report of these vast preparations, and soon after he received news of the march of two powerful armies against him; one of which was composed of confederate Germans, under the Marquis of Brandenburg, the Archbishop of Mentz, the Count Palatine of the Rhine, and other princes of the empire; and the other consisted of Hungarians and Silesians, and was led by the emperor himself. The former army was to invade Bohemia on the west, and the latter attack it on the east; they were to meet in the centre, and, as they vaunted, "crush this handful of vexatious sectaries between them." With such forces at his disposal the emperor was very sanguine of success, but those

acquainted with the composition of armies intended to march in concert, know the difficulty of making such unwieldy bodies execute exactly the movements traced out by prudent generals in councils of war; some unforeseen event generally creates unavoidable difficulties, and so it happened on this occasion.

Sigismund, disappointed in a contract for forage, was obliged to defer his departure; he was likewise retarded by the Austrian and Hungarian nobles, who, being suddenly called upon, had not their equipments and retainers in readiness for the field. The confederate German princes had begun their march, and were advanced a considerable way into Bohemia before they heard of the emperor's disappointment. Sigismund gave them hopes that he would presently join them, and advised them to form the siege of Soisin; accordingly they entrenched themselves before that place and began an attack, for which they were not well provided, against what was esteemed one of the strongest fortresses in Bohemia. The besieged laughed at their vain efforts, and maintained only the usual guard of the city, while wet trenches, want of provisions, an inclement winter, and above all, the emperor's long-continued delay produced a spirit of mutiny among the besieging forces and disunion in their councils. In this situation the Germans were ready to catch any alarm, and when Ziska approached with his army, the very sight of his banners floating at a distance was sufficient to cause their thorough demoralization. They struck their tents and retreated with precipitation, laying waste the country and cursing the emperor's breach of faith.

About the end of December, a full month after the appointed time, the emperor began his march, and as he entered Bohemia received the account of the retreat of the confederates. Sigismund, however, determined to proceed with his undertaking. He was at the head of an army, the flower of which was com-

posed of 15,000 Hungarian horse, esteemed at that time the best cavalry in Europe, and led by a Florentine officer of great experience; the infantry, which consisted of 25,000 men, was provided, as well as the cavalry, with everything necessary for a winter campaign.

This army spread terror throughout the east of Bohemia; wherever Sigismund marched, the magistrates laid their keys at his feet, and were treated with severity or favour, according as they were supposed to be well or ill affected towards his cause. But the emperor's career was presently checked, for Ziska, who had been pursuing the Germans in the west, approached by forced marches and threw a damp upon him in the midst of his success; he resolved, however, to try his fortune once more, and chose his ground as well as he was able. No general paid less regard to the circumstances of time and place than Ziska; he seldom desired more than to come up with his adversaries, and the enthusiastic fury of his soldiers did the rest. There was not a man in his army who did not face the enemy with the same invincible spirit with which the martyr meets death; who did not press to be foremost in that glorious band of heroes whom the Almighty should destine to the noble act of dying for their religion. Such were the troops whom Sigismund had now to encounter. On the 13th of January, 1422, the two armies met on a spacious plain near Kamnitz. Ziska appeared in the centre of his front line, guarded, or rather conducted, by a horseman on each side armed with a poleaxe. His troops having sung a hymn, with determined coolness drew their swords and waited for the signal. Ziska stood not long in view of the enemy, and when his officers had informed him that the ranks were well closed, he waved his sabre round his head which was the signal of battle. Historians speak of the onset of Ziska's troops as a shock beyond credibility; and it appears to have been such on this occasion. The

imperial infantry scarcely offered any resistance, and in the space of a few minutes were disordered beyond the possibility of being rallied. The cavalry made a feeble effort, but seeing themselves unsupported, wheeled round and fled on the spur. Thus was the extent of the plain, as far as the eye could reach, suddenly overspread with disorder, the pursuers and the pursued mingling together, in one indistinct mass of waving confusion; here and there might be seen a few parties endeavouring to unite, but they were broken as soon as formed. The routed army fled towards the confines of Moravia; the patriots, without intermission, galling their rear. The river Igla, which was then frozen, opposed their flight; and here new disasters befell them. The bridge being immediately choked and the enemy pressing furiously on, many of the infantry and the whole body of cavalry attempted the river; the ice gave way, and not fewer than two thousand imperialists were swallowed up in the water. Now Ziska sheathed his sword and returned in triumph to Tabor, laden with all the trophies which the most complete victory could give.

Our blind patriot was no less successful in dealing with false friends than in overcoming the hostility of open enemies. Coribut, a Polish chief, who had joined his standard with a large body of Lithuanians, having been found intriguing with the enemy, was expelled from Bohemia, and all the machinations of himself and his partisans were utterly frustrated.

The battle of Kamnitz having put Ziska in peaceable possession of the whole kingdom of Bohemia, he had now leisure to pay more attention to his design of establishing a Reformed Church. He abolished in all places the ceremonies of the Roman worship; erased the Pope's name from public instruments, and denied his supremacy. "Merit alone," he said, "should give distinction among the clergy of Bohemia; and they should gain the reverence of the people by the sanc-

tity of their lives, and not by their luxurious living." Ziska was now urged by his friends to allow himself to be proclaimed king, this he pertinaciously refused, and is said to have replied, "While you find me of service to your designs, you may freely command both my counsels and my sword, but I will never accept any established authority; on the contrary, my most earnest advice to you is, when the perverseness of your enemies allows you peace, to trust yourselves no longer in the hands of kings, but to form yourselves into a republic, which species of government only can secure your liberties." After the battle of Kamnitz, Sigismund made great preparations for a final effort, and proposed to enter Bohemia with two separate armies. With this view he placed the Marquis Misnia at the head of a considerable body of Saxons and their allies, who were to penetrate by the way of Upper Saxony; while he himself, at the head of another army, entered Moravia on the side of Hungary.

Ziska also made preparations for opening the campaign, and sent Procop, in whom he had entire confidence, to command in Moravia, hoping that that general would be able to keep the emperor employed till he himself should return from the frontiers of Saxony, whither he marched upon the first notice of the enemy's movements. To strike terror into the Germans, Ziska ravaged their border and boldly sat down before Ausig, a strong town situated upon the Elbe, near where that river leaves Bohemia. This place had always shown a particular attachment to the emperor, and was consequently recommended by him in strong terms to the protection of the Marquis Misnia; it was a sensible mortification, therefore, to that general to see an enemy already at the gates, and he determined to risk all rather than leave it a prey. Ziska, who carried on the works with his usual vigour, had brought the siege to its last stage, when the marquis appeared at the head of a

great army, and offered him battle; his maxim being never to decline to fight, he accepted the challenge, though he had many difficulties to encounter. The marquis had a superior army, and Ziska was obliged to thin his troops by leaving a large detachment to observe what took place in the town. The Saxons were advantageously posted, having taken possession of rising ground, which secured their flanks. A strong wind blew in the face of the Reformers, which, while it greatly weakened the flight of their arrows, added increased force to those of the enemy. Ziska, however, had little confidence in missive weapons; and on the present occasion his whole line, in the accustomed manner, with poleaxes and sabres made an impetuous attack upon the enemy, but the Saxons receiving the assault in good order, stood firm, and gave the Bohemians a severe check. This was a reception wholly unknown to the Reformers, who had ever been used to bear down all before them. In these new circumstances they were at a loss how to act, and retreated some paces, as if astonished at the novelty of their position. This critical moment the Saxons should have seized, for had they moved forward at the instant, it is probable the patriots would never have recovered from their surprise; but instead of making a general charge, they stood motionless, as though they had done enough in not suffering themselves to be beaten. Ziska, as if inspired, had a complete idea of the state of affairs, and being conducted to the front line, which stood unbroken, he cried out as he rode along, "I thank you, my fellow-soldiers, for all your past services; if you have done your utmost, let us retire." This noble rebuke stung them to the soul; every veteran gnashed his teeth with indignation, grasped his sword and pressed forward, closing hand to hand with the enemy, in the true temper of determined courage. The combat, thus renewed, soon became unequal; for some time the Saxons maintained

a feeble fight, but four of the principal officers being cut to pieces at the head of their battalions, the whole army gave way in every part and fled. A rout and massacre succeeded; the carnage was terrible, not fewer than 9000 Saxons being left dead on the field.

From this scene of blood Ziska recalled his troops to new fields of glory; "We must sleep to-night," cried he, "within the walls of Ausig." Thither the triumphant army carried the news of their victory. The Bohemians would grant no conditions; the governor was allowed half an hour to deliberate whether he would surrender at discretion or take the consequences; he chose the safer measure, and the Reformers were quietly quartered in Ausig before the close of the evening. The next day Ziska ordered the town to be dismantled, that it might no longer be a receptacle for his enemies; and broke down the stately bridge over the Elbe, to cut off as much as possible all communication with Saxony. These great events consecrated the 22nd of April, for many years, in Bohemia. Having settled everything to his entire satisfaction in the north-west, he returned with his victorious army to the assistance of Procop.

The news of Sigismund's retreat met Ziska near Prague; and as the Bohemian troops had made forced marches from Ausig, which produced great fatigue, he thought it proper to give them a few days' rest, and encamped therefore within three leagues of Prague. It could have been wished that the career of this celebrated blind general had been unsullied by anything approaching a crime, but truth obliges us to state that Ziska's ferocity was equal to his military skill, and that his followers spread the most fearful and indiscriminate ravages wherever they marched. Great allowance must however be made for the age in which he lived, and for the peculiar circumstances by which he was surrounded. The emperor at length earnestly wished for peace, and

a treaty most humiliating to German pride was by Ziska's influence concluded with the Bohemians, but the renowned leader was not permitted to enjoy the fruits of his labours. He was on his way to meet the emperor, and passing through a part of the country in which the plague was then raging, he was attacked by the malady, and died October 11, 1425, being only forty-five years old. Thus ended the earthly career of the greatest general Bohemia ever produced. His history on the whole is worthy of admiration, and his character and genius have ever won the most unbounded praise from all classes of mankind. His country soon had reason to mourn his loss. Fierce dissensions broke out among the once invincible Hussites, and all that Ziska fought to maintain was swallowed up, and as far as Bohemia was concerned irrevocably lost. It is singular to observe how time changes the opinions of men. At the battle of Ausig Protestant Bohemians fought Catholic Saxons in defence of their religion; now the descendants of Ziska and the Hussites are Catholic, and the Saxons Protestant; but although Ziska's countrymen have not proved true to the cause for which the blind general so often led them to victory, yet his example must ever be an incentive to determined action to those who have to cope with difficulties which seem to require superhuman abilities to overcome. The remains of this great man were deposited in the church at Craslow, in Bohemia, where a monument was erected to his memory, with an inscription to this effect:—"Here lies John Zisca, who, having defended his country against the encroachments of Papal tyranny, rests in this hallowed place, in despite of the Pope." There is a legend connected with Ziska, which, although not amply authenticated, we think it better to insert here, viz.: It is said that "he ordered that his body should be left a prey to the birds and wild beasts, alleging that they were more worthy devourers than the worms of the earth, and that a drum should be made of

his skin, he being persuaded that the enemy would fly as soon as they heard the sound. It is added that the Hussites executed his will in the latter respect, and that the news of this circumstance made such an impression on the disturbed imaginations of the German Papists, that in many battles they actually fled at the beat of the drum with the utmost precipitation, leaving their baggage and artillery behind them."

Basilius, or Basil III., Czar or Prince of Moscow.

This prince began to reign over that part of Russia, of which Moscow was then the capital, in 1425. His long reign of thirty-seven years was almost entirely occupied in wars with the other princes of Muscovy, and in efforts to throw off the yoke of the Tartars, who then held Russia in subjection. About the year 1450 he was defeated and blinded by Demetrius, a Russian prince, in revenge for the cruelties practised on his brother Kossoi, whose eyes had been put out by Basilius. Demetrius, however, triumphed but a short time, for the people soon overcame his forces, and restored Basilius, now blind, to the throne. Throughout the remaining twenty-two years of his reign a remarkable degree of success attended his administration. His implacable enemy Demetrius having taken refuge in the semi-independent city of Novogorod, soon after died of poison, by whose agency administered is not stated, but it is certain that Basilius imposed a fine on the citizens of Novogorod of ten thousand roubles, in punishment for the asylum they had afforded to Demetrius. All that is further known of Basilius is that he died in 1462, and was succeeded by his son Ivan, or John Bascolowitz, the first prince who threw off effectually the Tartar yoke.

Shah Allum, the Great Mogul.

The subject of this article, Prince Ali Goher, succeeded to the throne of the Mogul Empire about the year 1761, and took the title of the Emperor Shah Allum the Second. He was the son of the Emperor Allumghir, who had been assassinated a few years before by a rebel general. At that time very little was left to the Mogul dynasty, except the city of Delhi, and a small surrounding territory, Hindostan being divided among many independent princes, who were constantly at war with each other. Shah Allum was proclaimed emperor at Patna, Delhi being then in the hands of his enemies, and after residing some years at Allahabad under the protection of the British, who were then rapidly increasing their power in India, he raised a small force, and succeeded in taking possession of his capital, then in a most ruinous condition. His vizier Gholam Kadir was continually plotting against him, and although after an unsuccessful revolt he was freely pardoned, yet on his treacherously getting possession of the person of his sovereign, with his own hand he put out his eyes with a poniard. Shah Allum, however, although blind, was soon restored to his throne by the aid of the Mahratta princes, and the inhuman Gholam Kadir was put to a painful death.

The Shah remained more or less dependent on the Mahratta princes until 1803, when Delhi was taken by the English, who allowed him a pension, and permitted him to retain the nominal title of emperor. After eighteen years of blindness, and a reign of forty-four years, Shah Allum died in 1806, and with him the empire of the house of Timur, commonly known as the Mogul Empire, may be considered as having terminated, and the British East India Company, after half a century of wars and conquests, succeeded to the splendid inheritance. Shah Allum, although not a great prince, was still far from being an indifferent poet, as may be

seen by the following extracts, as translated from the Persian, and published in the 'St. James's Magazine' for August, 1866. Bewailing his misfortunes he says:—

"O'er India's fair extensive plain,
Auspicious dawn'd my early reign;
Too soon the flattering prospect fled;
Now sorrow shrouds this aged head.
* * * * * *
Within the harem's scented bowers
No more I'll pass the blissful hours;
No more shall hear the tuneful throng
Harmonious raise th' enraptured song.
In the lone prison's dreary round
The night-owl wakes her mournful sound;
No courtiers crowd the emblazoned hall,
No ready menials wait my call;
My plaints in lingering echoes die,
And the arched domes responsive sigh.
Here murder stalks, suspicion reigns,
Mysterious silence chills my veins.
* * * * * *
Has British justice, Britain's boast,
With Hastings left Hindostan's coast?
Are favours past remembered not,
A ceded empire—all forgot?
Forgot the day when first they came,
And humbly urged the stranger's claim;
Poor wanderers from a foreign shore,
By peaceful trade to increase their store?
* * * * * *
Immersed in anguish deep,
Unheard I mourn, unpitied weep;
No gleam of hope, with cheering ray,
Gilds my expiring streak of day;
Its parting beams pale lustre shed,
The shadowy veil of night is spread.
Come, awful death! hail, kindred gloom!
For me no terrors shroud the tomb.
In death—all worldly sorrows end;
In death—the friendless find a friend;
In death—the wearied seek repose,
And life—release from human woes.
At the glad summons, pleased, I'll fly,
For who so friendless, fall'n, as I?
Revengeful war can ne'er invade
The inviolable realms of shade;

Ambition there can ne'er intrude,
Nor malice, nor ingratitude;
There mortal foes' contention cease,
Forget their feuds, and sleep in peace.
Freed from his chains, the toil-worn slave
Escapes from bondage to the grave;
There, there I'll mock the tyrant's power,
And triumph in my latest hour."

Pfeffel, Privy Councillor, and Instructor in the Art of War.

Dr. Guillie, Director of the Paris Institution for the Blind, writing at the commencement of the nineteenth century, gives the following account of the subject of this notice:—

"Pfeffel of Colmar, who lost his sight when very young, in consequence of a violent ophthalmia, has composed some very pretty poems, principally fables (6 vols. 8vo, Colmar, 1791), some of which have been translated into French by Degerands. He was privy councillor to the Margrave of Baden; and he established at Colmar a military school, where persons of the first families sent their children. The Prince of Schwartzenberg and the Prince of Eisemberg, who were brought up there, are proud of having had this learned blind man for their master.

"M. Heilman, now a pensioner of the Quinze-Vingts, was also his pupil, and does him the greatest honour. M. Pfeffel died at Colmar in 1809."

Poets, Philosophers, and Men of Letters.

Homer.

Whoever requires proof that blindness does not disqualify its victims from the exercise of their full mental powers, may assuredly find it in the fact that the two greatest poets the world has ever seen lacked

the use of their visual organs; and as though it were to be made clear that this circumstance was independent alike of time and place, these two great intellectual lights were not permitted to flourish in any one age or place, but the one appeared at such an early period of Grecian history, that even as to precedence of date he is justly called the 'Father of Song'; and the other performed his inimitable task when it might fairly have been thought that the lustre of English verse had reached its greatest brilliancy. Yes, if the blind were challenged to name any department in which their class had excelled, they need only utter the names of Homer and Milton to fill their challengers with dismay. The subject of this notice was a strolling blind ministrel, who begged his bread from city to city, and obtained the name 'Homer,' or 'blind man,' as an epithet of contempt. The date and place of his birth have given rise to much disputation; but the balance of evidence goes to prove that he was born of Greek parents, about 900 years B.C., at the city of Smyrna, in Asia Minor. Seven cities disputed the glory of having given him birth, which are enumerated in the following distich :—

"Smyrna, Rhodes, Colophon, Salamis, Chois, Argos, Athenæ:
Orbis de patria certat, Homere, tuæ."

Or as a modern poet has complained :—

"Seven mighty towns contend for Homer dead,
Through which the living Homer begged his bread."—*Pope.*

We have no authentic particulars of Homer's life. The most regular account is that which goes under the name of Herodotus, and which is usually printed with his history; and although it is said to be spurious, yet it is undoubtedly ancient, as it was made use of by Strabo, and therefore exhibits the idea which the later Greeks, and the Romans, in the age of Augustus, entertained of Homer, and as we have no better, we must content our-

selves with it, and this account is therefore now inserted here. "Menalippus, a native of Magnesia, is said to have settled at Cumæ, where he married the daughter of a citizen, called Homyres, and had by her a daughter, Critheis. The father and mother dying, the young woman was left under the tuition of Cleonax, her father's friend, by whom she was seduced, and who, on her proving with child, sent her to Smyrna, which was then building, to conceal the misfortune. This was eighteen years after the foundation of Cumæ, and about 168 after the destruction of Troy. Critheis was here delivered of Homer, whom she called Melesigenes, because he was born on the banks of that river. Her good conduct afterwards induced Phemius, a schoolmaster, to marry her, and adopt her son. After the death of Phemius and Critheis, Homer succeeded to his father-in-law's school, until a shipmaster, named Mentes, who was a man of learning, persuaded him to travel with him. This brought him to Egypt, whence he took into Greece the names of the Egyptian gods, the chief ceremonies of their worship, and a more improved knowledge of the arts. In addition to Egypt he visited other parts of Africa, and also Spain; in his return from whence he touched at Ithaca, where he was first troubled with a disease in his eyes. Being recommended to Mentor, one of the chief men of Ithaca, he was by him informed of many things relating to Ulysses, which he afterwards inserted in his Odyssey. After much time spent in visiting the coasts of the Peloponnesus and the islands, our poet arrived at Colophon, where he lost his sight."

"High on the first, the mighty Homer shone;
Eternal adamant composed his throne;
Father of verse, in holy fillets drest,
His silvery beard waved gently o'er his breast;
Though blind, a boldness in his looks appears;
In years he seemed, but not impaired by years."—*Pope.*

The misfortune of blindness made Homer resolve to

return to Smyrna, where he finished the Iliad. Some time after, the ill-posture of his affairs obliged him to go to Cumæ, where he hoped to have found some relief. Here his poems were highly applauded; but when he proposed to the inhabitants to immortalize their town, if they would allow him a salary, he was answered, "that there would be no end of maintaining all the Ὅμηροι, or "blind men," and he hence got the name of Homer. He afterwards wandered through several places reciting his poems, and followed by crowds of boys. Being at Phocæa, a schoolmaster, named Thestorides, offered to maintain him, provided he would suffer him to transcribe his verses, to which he agreed from necessity. The schoolmaster then went to Chios, where he acquired great wealth by Homer's poems, while the poet himself could scarcely get bread by reciting them. Homer on this proceeded to Chios, and Thestorides, hearing of his arrival, fled before him. Here he opened a school for poetry, married, and had two daughters. Homer died at Chios, and it is said was buried on the sea-shore.

The principal works ascribed to this extraordinary blind man, are the 'Iliad' and 'Odyssey.' The Batrachomyomachia, or battle of the frogs and mice, is rejected by almost all modern critics, as a parody incompatible with the simplicity of the Homeric age. Of his hymns, some are acknowledged by Lucian and Pausanias; others are undoubtedly spurious. Of the Iliad and Odyssey, the editions are very numerous. The best are those of Barnes, Clarke, and Heyne. The leading English translations are those of Pope and Cowper, in rhyme and blank verse, and that by the Earl of Derby, 1864.

It has been well said that the misfortunes of Troy furnish the two most perfect epic poems in the world, written by the greatest poet that has ever lived. Among the thousands of volumes consumed in the fire of Constantinople, A.D. 477, were the works of Homer,

said to have been written in golden letters, on the intestines of a dragon, 120 feet in length. The writings of this poet are supposed by some to have done great injury to mankind, by inspiring them with the love of military glory; but such persons forget the fearful wars that raged before Homer's day, in Assyria, Egypt, Palestine, and every country of the world. What Homer did was to ennoble just wars, and surely this was not a crime. Alexander the Great was said to have slept with the Iliad and Odyssey constantly under his pillow, with his sword, and he carefully deposited the Iliad in one of the richest and most valuable caskets taken from Darius, observing that "the most perfect work of human genius ought to be preserved in a box, the most valuable and precious in the world;" and on viewing the tomb of Achilles, he expressed regret that "he should not be so fortunate as that hero, in having a Homer to record his deeds." The Iliad and the Odyssey are each divided into twenty-four books, being the number of letters in the Greek alphabet. The Iliad has been compared to the mid-day, and the Odyssey to the setting sun. The poems of Homer were so universally admired in ancient times, that every man of learning could repeat with facility any passage in the Iliad and Odyssey. They are evidently the compositions of a traveller who examined with the most critical accuracy whatever deserved notice. Modern explorers are astonished to find the different scenes which the pen of Homer described about 3000 years ago, still existing in the same unvaried form, and the sailor who steers his course along the Ægean Sea, beholds all the promontories and rocks which appeared to Nestor and Menelaus, when they returned victorious from the Trojan war. The ancients had such veneration for Homer, that they raised temples and altars in his honour, and worshipped him as a god. The inhabitants of Chios celebrated festivals every fifth year in his memory, and medals were

struck, which represented him sitting on a throne, holding his Iliad and Odyssey. The view that Homer took of his affliction of blindness may be gathered from the following lines, which occur in his description of the Bard of King Alcinous, in which he is supposed to be describing himself.

"Him dearly loved the Muse, and shed
Both good and evil on his head.
Took from his eyes their earthly sight,
And filled his soul with her own heavenly light."

Again, in a poem attributed to Homer, in addressing the maids of Delos, the translator makes him speak thus:

"Virgins farewell—and O, remember me,
Hereafter, when some wanderer from the sea,
Some hapless stranger shall your isle explore,
And ask you maids, of all the bards you boast,
Who sings the sweetest and delights you most—
O, answer all, a blind old man and poor,
Sweetest he sings, and dwells on Chios' rocky shore."

In the Odyssey, Homer thus speaks:

"Dear to the Muse, who gave his days to flow
With mighty blessings, mixed with mighty woe;
With clouds of darkness quenched his visual ray,
But gave him power to raise the lofty lay."

The rich variety which pervades Homer's writings may be gathered from the following fact. There are twenty descriptions of various effects of wind upon water, all different, and all without one fictitious or exaggerated circumstance. Homer is sometimes called Mæonides, after the name of his reputed father. Nothing was ever comparable to the clearness and majesty of Homer's style; to the sublimity of his thoughts, or to the strength and sweetness of his verses. All his images are striking, his descriptions just and exact, the passions are so well expressed, and nature is so justly and finely painted, that he gives to everything motion,

life and action. But he more particularly excels in invention, and in the different characters of his heroes, which are so varied, that they affect us in an inexpressible manner. In a word, the more Homer is read by a person of good taste, the more he is admired. Nor are his works to be esteemed merely as entertaining poems, or as the monuments of a sublime and varied genius. He was in general so accurate with respect to costume, that he seldom mentioned persons, or things, that we may not conclude to have been known during the times of which he writes; and it was Pope's opinion, that his account of people, princes, and countries, was purely historical, founded on the real transactions of those times, and his works form by far the most valuable part of history and geography left us concerning the state of Greece in that early period. His geographical divisions of that country were thought so exact, that we are told of many controversies concerning the boundaries of Grecian cities which were decided upon the authority of his poems, and no writer of ancient or modern times has been able in conception and portraiture of character to compete with him.

Diodorus.

Passing by several cases of doubtful authenticity, such as that of Democritus, who is said to have put out his own eyes to enable him to study the better, the next person we come to in the order of time that may be said to belong to this part of the classification we have chosen, is Diodorus, the Roman philosopher, who flourished about one hundred years before Christ. He was the preceptor of Cicero, and that distinguished orator states that he applied with such assiduity to study after he lost his sight, and taught geometry with so much clearness, that his pupils had not the slightest difficulty in understanding the way to trace the various

figures, however complicated they might be. It is somewhat singular that there was another blind philosopher of this name, who is usually mentioned as Diodorus the Stoic. It is stated that he was at once a philosopher, geometrician, and a musician, and that, although he had been blind from birth, his instructions in geometry were so complete that he left nothing unexplained to his numerous pupils.

Didymus of Alexandria and Eusebius the Asiatic.

Didymus, the famous academician and theologian, was born at Alexandria about A.D. 308. He became blind at the age of five years, when he had just learned to read. But notwithstanding his heavy bereavement he made great progress in learning, and became thoroughly conversant with grammar, arithmetic, music, logic, rhetoric, geometry, and astronomy, which seven sciences were in those days considered to comprehend the whole cycle of human learning. To such an extent did his proficiency advance that he eventually became the principal of the Catechetical School of Alexandria, and he had the satisfaction of numbering among his pupils such distinguished men as St. Jerome, Rufinus, Paladius, and Isidore. He delivered lectures which were much applauded by his auditors, who expressed their belief that blindness increased rather than lessened his abilities. But Didymus seems never to have been thoroughly reconciled to his state, for we find that when St. Anthony, the celebrated hermit, asked him if he grieved that he was blind, he replied that he certainly did, and, although frequently pressed on the matter, he could never be induced to make any other answer. This is much to be regretted, as the first duty of the Christian is to acquiesce cheerfully and thankfully in whatever is

unmistakably the will of his heavenly Father. The sharp reply of St. Anthony was not, however, calculated to soothe the philosopher's regret. "I am astonished," said he, "that so judicious a man as you should regret a thing, which is common to the most contemptible animals as well as to man." Didymus was the author of a valuable work on the Holy Spirit, a Latin translation of which was made by his pupil, St. Jerome. This production has come down to us, as also his book against the Manicheans ('Lib. adv. Manichæos,' Gr. et Lat.); his work on the Trinity ('De Trinitate Lib. III.'), and his Compendious Exposition of the Canonical Epistles ('Brevis Enarratio in Epist. Canonicas'). Several of his writings are known to have been lost, including a Commentary on the Bible. He died about the year A.D. 395, at the age of eighty-seven; and after his death his books were condemned by the Council of Lateran on account of their leaning to the doctrines of Origen. Notwithstanding this condemnation, the learned and pious Joseph Milner says that, as far as appears, Didymus continued always sound, and humble, and holy in Christian doctrine. The subject of this article must not be confounded with another Didymus, 'of Alexandria,' who lived about two centuries earlier. He possessed the full use of his eyes, and wrote, it is said, three thousand books, of which it has been remarked "that it is well for the world they are all lost." The fourth century produced a blind Christian philosopher named Eusebius. To distinguish him from others of the same name he is always denominated 'the Asiatic.' He became blind at five years of age, acquired vast knowledge and erudition, and taught with great ability and success. It is much to be regretted that these very scanty particulars are all that is known about him, as fuller details of the life of such a man could not fail to be of the highest interest.

Sir John Gower, the founder of the Sutherland family.

Omitting a detailed notice of Ossian, whom we think there is sufficient evidence to class among fabulous characters, we come to our own English poet, Sir John Gower.

This celebrated scholar was born about the year 1322, and we are informed by Andrews that he was a man of family and reading, that he was bred to the study of the law, and that his works exhibit more learning than genius. He wrote in Latin, French, and English, and his style was smooth and intelligible. He received great encouragement from the unfortunate Richard II., by whose request he wrote his principal book, entitled 'Confessio Amantis,' which is the only work of Gower's that has appeared in print. It is said that the king meeting the poet accidentally on the Thames, desired him "to book some new thing." Sir John was the contemporary and friend of Chaucer, but was much inferior to him in ability. On the accession of Henry IV. he extended his patronage to Gower, who in return loaded him with fulsome flattery. This is much to be regretted, as the great favours he had received from Richard should have at least kept him from fawning on his murderer. Gower lived to a great age, and became blind three years before his death, which took place in 1402,—when he had reached his eightieth year. After his blindness he republished some of his works, and among other pieces wrote some Latin verses deploring his loss of sight. He was buried at the church of St. Mary Overy, *i. e.* St. Saviour's, Southwark, to which edifice he had liberally contributed during his life, and which still contains his tomb, adorned with three books, as indicative of the three principal works of the tenant that sleeps below. During a thunder storm, which broke over London at an early hour on July 26th, 1870, the

lightning struck the pinnacle of St. Saviour's Church, which burst open and flew into ten thousand fragments of various sizes from a ton to a few pounds' weight. One of the immense pieces fell through the elegant roof of the transept and came down with a tremendous crash at the foot of the famous monument of our blind poet, which barely escaped destruction.

James I. of Scotland, in his writings, calls Gower and Chaucer the two fathers of English poetry. Some idea of Gower's style, and of the versification common at the end of the thirteenth century, may be gathered from the following specimen of his compositions:—A princess was cured of hard-heartedness to her admirers by a vision. She saw many beautiful damsels, richly dressed and superbly mounted, ride along, followed by a lovely creature all in rags, on a lean worn-out hackney, loaded with halters and most wretchedly accoutred, except as to her bridle, which was studded with gold and jewels. "What means this?" said the princess. "Those fine ladies," said the ragged one, "have listened to love, but as for me—

"For I* whilome no love had,
My horse is feeble now and bad,
And alto† torne is my arraie;
And every year, this fresh Maie,
These lustie ladies ride aboute,
And I must nedis sew‡ thir route,
In this manner, as ye nowe see,
And trusse thir halters forth, with mee;
And I am but their horse-knave,"‖ etc.

The fine bridle had been allowed to her, because she had been one fortnight thoroughly in love.

"Now have ye herde all mine answere,
To Godde, Madam, I you betake,

---

* Because I formerly. † quite. ‡ follow. § groom.

And warneth all, for mie sake,
Of love, that there be not idell,
And bid hem thinke of my bridell,
And with that worde all sodenly
She passeth, as it were a skie,*
All clean out of the ladies' sight," etc.

Henry the Minstrel, or Blind Harry.

The biography that last claimed our attention shows how a man possessing true courage may contend against affliction, when it overtakes him in advanced life; for Sir John Gower, although of the age of seventy-seven when he lost his sight, yet continued his ordinary avocation of writing and publishing poems. The character now before us, on the other hand, points out how difficulties, usually deemed insurmountable, may be overcome, even when the sufferer has to begin his existence surrounded by their baneful influence. Henry the Minstrel was a native of Scotland, and was born blind about A.D. 1361. Nothing is known of his parentage or surname, but by some means he managed to become acquainted with Latin, French, and the principal sciences of the day. He travelled the country as a mendicant, rehearsing poems of his own composition, which were so highly appreciated that the noble and wealthy often liberally supplied his pecuniary wants. He lived about one hundred years after his country's famous hero, Wallace, and his principal poem recounts the achievements of that commander.

This composition was popular in Scotland for a long time, but at length fell into neglect. It was, however, rescued from obscurity by the Earl of Buchan, toward the end of the last century. It was originally written in the Scottish dialect, but is now published in a modernized form. Dempster thus speaks of this remarkable person:—"Henry was a man of singular happy genius. He was indeed another Homer. He

* A shade.

did great honour to his native country, and raised it above what was common to it in his age." The following may be given as a specimen of Blind Harry's works, which is taken from the Battle of Biggar:—

"Now Biggar's plains with armed men are crown'd,
And shining lances glitter all around;
The sounding horn and clarion all conspire
To raise the soldier's breast, and kindle up his fire.
So Triton, when, at Neptune's high command,
He heaves the swelling surge above the land;
When, with full breath, he bids the tempest roar,
And dash the sounding billows to the shore;
His angry waves the wrinkled seas deform,
They rise, they roar, and blacken to the storm,
Each eager soldier seized his ready shield,
Drew the fierce blade, and strode along the field.
The blackening wings extend from left to right,
Condense the war and gather to the fight!
Now rose the battle,—there the warriors tend,
A thousand deaths on thousand wings ascend;
Swords, spears, and shields, in mixed confusion glow,
The field is swept, and lessens at each blow.
Wallace's helm, distinguished from afar,
Tempests the field, and floats amid the war
Imperious death attends upon the sword,
And certain conquest waits her destined Lord!
Fierce in another quarter, Kent employs
The wrathful spear, nor fewer foes destroys.
Where'er he conquering turns recedes the foe,
And thicken'd troops fly open to his blow;
His bounding courser thund'ring o'er the plain
Bears his fierce, rapid Lord o'er hills of slain!
Scarce can the weak retreating Scots withstand
The mighty sweep of the invader's hand.
Wallace beheld his fainting squadron yield,
And various slaughter spread along the field;
Furious he hastes and heaves his orbed shield,
Resolv'd in arms to meet his enemy;
Before his spear they run, they rush, they fly!
And now in equal battle met the foes,—
Long lasts the combat, and resound their blows;
Their dreadful falchions brandishing on high,
In wary circles heighten to the sky.
Now all is death and wounds;—the crimson plain
Floats round in blood, and groans beneath its slain;
Promiscuous crowds one common ruin share,
And death alone employs the wasteful war;

They trembling fly, by conquering Scots oppress,
And the broad ranks of battle lie defaced;
A false usurper sinks in every foe,
And liberty returns with every blow!"

There is no record of the date or place of Henry's death, but his life is far from being uninstructive. With the difficulties of poverty and blindness he had to contend from his very infancy, and that too in a rude age and country where strength of muscle was king; but Henry had a soul capable of detecting and appreciating virtue, and he felt that if he could not be useful to his fellow-men in the field he still had it in his power to make known what others had done, and thus to stimulate those around him to dare and die in the cause of right. The memory of Henry the Minstrel should be especially dear to the blind of these countries, as his difficulties and successes are at once an example worthy of imitation, and an evidence that blindness from birth, deep poverty, and an obscure origin, do not of themselves deprive any one of being useful in his day and generation. Burton in his History of Scotland says:—"Among the many who have chronicled Wallace's fame, Henry, the Blind Minstrel, is pre-eminent in having devoted his whole force to the glorifying of his hero;" and Andrews, in his History of England, calls Henry "the Northern Homer."

Ludovico Scapinelli, the Italian Philologist and Poet.

The distinguished man of letters whose name heads this article was born at Modena, in 1585, and was either blind from birth, or became so when quite an infant. He early exhibited great intellectual powers, and, having attracted the notice of his sovereign, the Duke of Modena, that prince entertained such a high opinion of his abilities that he entrusted him with the education of his own son, which is the more remark-

able as the blind tutor was then under twenty-four years of age. So well, indeed, was the Duke satisfied with Scapinelli's instruction of the royal prince, that he procured his election as one of the professors of eloquence at the University of Bologna, where it is said he took the degree of Doctor. In 1617, being annoyed at something that took place at Bologna, he left that city, and successively filled the Chair of Literature at the Universities of Modena and Pisa. Ill-health, however, obliged him, in 1621, to retire from active pursuits, but in privacy he devoted himself so ardently to study that the fame of his acquirements spread throughout Italy, and in 1628 he was recalled to Bologna, and installed as the chief professor of eloquence. This crowning event of his life Scapinelli was not permitted long to enjoy, as he died suddenly at Modena, Jan. 3, 1634, when only forty-eight years old.

Living in an age when purity of style was lost by the abuse of reason, Scapinelli yet had sufficient strength of mind and love of truth to avoid the gross falsehoods and the greater number of the ingenious subtleties of the so-called learned men of his day, and, if he did not succeed in entirely avoiding their errors, it was because it is almost impossible to remain altogether uninfluenced by the times and circumstances in which we live.

The edition of his works published at Parma under the title of 'Opere del Lettore Lodovico Scapinelli,' 2 vols. 8vo, contains several Italian and Latin poems, and also some pieces in prose, and fifteen dissertations on Titus Livius. He also wrote Commentaries on the works of Horace, Justin, and Seneca, and translated part of Virgil's Æneid, but these have not appeared in print.

Speaking of Scapinelli, a judicious author says, "All his works are distinguished, not only by their learning, but by a purity and elegance of diction, rare at the

time when he flourished. He was accounted, indeed, one of the most finished scholars of that day."

Field Marshal Count de Pagan.

Blaise François de Pagan was descended from a Neapolitan family, and was born at Avignon, in France, in 1604. He entered the army when twelve or fourteen years old, and rose to great distinction. When quite young he lost the sight of one eye by a musket ball, at the siege of Montaubon, 1621, and became totally blind at the age of thirty-eight, from a distemper that attacked him in Portugal, where he had been sent with the rank of Marshal to command the French troops. In the case of Pagan it happened, as in that of many others, that his usefulnesss was greater after his affliction than before the calamity of blindness came upon him: and to this day the Count is known far more widely for what he did when blind, than for his achievements while he had sight. On being cut off from participation in the dangers of the field, Pagan (who had ever been fond of mathematics) devoted himself with all the force of a great mind to the investigation of the laws of attack and defence. These labours resulted, three years after, in the publication of 'A Treatise on the Art of Fortification,' which work entitles him to be considered as the founder of that science.

In 1651 appeared his "Geometrical Theorems," which show that he possessed a perfect mastery of every branch of the mathematics, and four years later he printed a translation from the Spanish of an account of the river Amazon, by the Jesuit Father De Ranez, accompanied by a chart, which, it is said, was drawn by Pagan himself. Critics aver that this chart contains many defects; but the same remark applies to nearly all similar productions of that period, still, that the Count should have accomplished such a task, however imperfectly, in his sightless condition, is truly a matter of surprise.

In 1657 he published the theory of the planets, cleared from the multiplicity of eccentric circles and epicycles which astronomers had invented in their endeavours to explain the motions of the heavenly bodies. This work proved him to be as great an astronomer as he had previously shown himself an engineer.

In the next year were issued his Astronomical Tables, which, although prepared by a blind man, are pronounced on all hands to be very succinct and clear. His great knowledge, however, did not save him from the special error of his day, viz. a belief in astrology, and of course what he wrote on this subject was like everything else of the kind, mere trash.

Pagan was never married, but his character is described as having been most estimable. He was beloved by all who knew him, and his house was the rendezvous of the bravest, the most learned, and the best of the court and city of Paris. He died at the age of sixty-one, in 1665.

Before leaving this brief notice of Pagan's life, we cannot forbear adding that it was he who first enunciated the proposition of vertical firing, which is at present one of the leading features of the art of war. This principle, although neglected for two centuries, is now undoubtedly the most potent in the science of attack; without it casemates, with an indefinite supply of food, would be impregnable, but by its aid access is gained to the strongest and most subtilely devised fortress, and we have the satisfaction of claiming this discovery as having been effected by a blind man.

John Milton.

This greatest of English poets, and probably the greatest the world ever saw, was descended from a family, whose seat was at Milton, near Thame, in Oxfordshire.

His father, also named John, being disinherited on

account of his becoming a Protestant, was obliged, although educated at Christ Church, Oxford, to enter into trade for his support. The profession selected was that of a scrivener, or a drawer up of agreements, which for some time he carried on in Bread Street, Cheapside, London, then one of the most respectable thoroughfares, his place of business being designated by the sign of a spread eagle, in accordance with a custom then prevalent of having houses of business of all kinds indicated by signs. The spread-eagle may have been in this instance taken from the arms of the Milton family, or it may have been common to all the members of the Scriveners' Company; but however this may be, the subject of these pages was born at the Spread-eagle, Bread Street, Cheapside, London, on Friday, December 9, 1608, at six in the morning, in the fifth year of the reign of James the First,—the birth of Milton occurring six years after the death of Shakespeare, and in the register of the church of Allhallows, Bread Street, is the following entry: "The 20th daye of December, 1608, was baptized John the Sonne of John Mylton, Scrivener."

It is matter of congratulation that the registers were saved when the church fell a prey to the great fire. The present edifice, like so many other city churches, was erected from a design of Sir Christopher Wren. By the Watling Street door of the church of Allhallows may still be seen on the wall this inscription in memory of Milton, viz.:—

"Three poets, in three distant ages born,
Greece, Italy, and England did adorn.
The first in loftiness of thought surpass'd,
The next in majesty; in both the last.
The force of Nature could no further go,—
To make a third she joined the former two."

"JOHN MILTON
was born in Bread Street the 9th day of December, 1608, and was baptized in the parish church of Allhallows, Bread Street, on Tuesday, the 20th of December, 1608."

The poetical lines commencing the above quotation are by Dryden, the contemporary of Milton, and they are of great value as showing the estimate formed of him in his lifetime by the writer, who was poet-laureate to Charles the Second. It is worthy of remark that Milton's father possessed great musical abilities, as may be seen by the specimens of his compositions given in Burney's 'History of Music,' and in the works of Sir John Hawkins, and also by the psalm-tune named "York," now so commonly used in English churches and chapels. The maiden name of the poet's mother was long supposed to have been either Sarah Bradshaw or Sarah Caston, and it was imagined that she was of Welsh descent; but a paragraph appeared in a newspaper in November, 1868, stating that T. L. Chester had discovered among the marriage allegations in the Bishop of London's Registry that the mother of John Milton was Margaret, the daughter of Paul Jeffray, of the parish of St. Swithin's. Milton's mother was a woman possessing a very estimable character, and was much beloved by the poor of her neighbourhood. Mr. and Mrs. Milton had several children, but only three reached maturity; these were: Anne, who became the wife of Edward Philips, of the Crown Office, London; John, the poet, and Christopher, who joined the Romish Church some time before his death. The parents seem to have formed high hopes of the capacity of their son John, even from his tenderest years, and a portrait of the boy, which is still extant, fully justifies their predilection. No trouble or expense was spared in the training of the child; all that motherly affection and fatherly judgment and generosity could do was brought to the cultivation of his head and heart.

The parents themselves superintended his earliest studies, and at the proper time a tutor was obtained, who was taken to live with the family, in order that he might devote his whole attention to his young

charge. With what care this preceptor was selected, and with what faithful assiduity he performed his task, is abundantly shown by the history of his illustrious pupil. This tutor's name was Thomas Young, said to be a Scotchman. In after years Milton treated him with the greatest respect, and spoke of his care of him as equalling that of a father. Mr. Young some time after became a Puritan minister, and was chaplain to the English merchants at Hamburg; it is also said that he was Master of Jesus College, Cambridge, during Cromwell's protectorate. It was not long before Milton's poetic bias showed itself, for we have it on his brother's authority that he wrote good verses in his eleventh year; and perhaps we may here be allowed to gaze on a pleasing picture, which a sagacious writer has prepared for us. He says: "We have now before us a boy of about twelve years old, with auburn hair, clear brown eyes, a bright complexion, and a small, almost girlish mouth. He is sitting at a table, and seems engaged in putting some passages of English poetry (perhaps some lines from the 'Fairy Queen') into Latin verse. His forehead is slightly contracted, as though he were resolved to be very earnest about his work; but he is glancing a little wistfully towards the volume of poetry at his side. Opposite sits a man who is dressed as a clergyman, and has a gentle, intellectual face; he has looked up from the large folio open before him, to smile encouragingly at the boy—sympathizing, no doubt, with those longing glances at the volume of poetry; for his face is not that of a narrow-minded pedant who thinks Greek and Latin the only languages in which the rarest gems of literature can be set. These are John Milton and his tutor Young." The lovers of antiquarian research cannot now have the pleasure of visiting the house of Milton's birth, as it was involved in the wide-spread ruin of the great fire of 1666. It is, however, supposed that it occupied the site where

now stand the third and fourth houses on the left from Cheapside.

At the age of twelve Milton entered St. Paul's School, then under the management of Alexander Gill, with whom was associated his son as usher; here he applied himself with great assiduity to his studies, and was soon distinguished for his success in the ancient languages. While, however, he followed scholastic studies by day, he applied himself with no less ardour to the reading of poetical and other works by night. This eagerness in the pursuit of information laid the foundation of the vast amount of knowledge for which he was distinguished in after-life, but at the same time it also, even at that early period, caused him to suffer from weak eyes and frequent attacks of headache. While here he made the acquaintance of Charles Diodati, the son of an Italian Protestant. This connection ripened into sincere friendship, which not even the separation of many years could lessen. On leaving St. Paul's School, Diodati proceeded to Oxford University, but his correspondence and meetings with Milton were as frequent as circumstances would permit. Milton also made the friendship of the younger Gill, but separation and other causes in a few years produced an estrangement. When at the age of fifteen, our poet wrote paraphrases of the 114th and the 136th psalms. These compositions are still extant, and are spoken of with applause. We must not omit to state that at this time Milton alleviated the severity of his more arduous studies by the cultivation of his musical abilities, which were considered above mediocrity. When sixteen years old he quitted St. Paul's School, which by the way was a different building from that which now occupies its place, and in the same year he was entered at Christ's College, Cambridge, and placed under the care of a tutor named Chappell, and it may give some idea of contemporaneous events to notice that Charles the First ascended

the throne the year following Milton's entrance at Cambridge. The success of our student at the University was no less marked than it had hitherto been; he was distinguished for the excellence of his Latin poems, and the elegies and epitaphs written at this time have induced the best critics to decide that he was the first Englishman, after the revival of letters, who wrote Latin verses with taste. While at college, Milton exhibited the high spirit which always distinguished him.

Disgusted with much that he saw around him, his love of truth and justice found vent in words, and on one occasion, at least, it also manifested itself in a way which nearly led to very serious consequences. His tutor Chappell and he, having had some personal altercation, the exercise of tongues led to the use of hands, which caused a tussle to take place, and led to the interference of the principal of the college. This, or some other circumstance, produced Milton's temporary suspension, but after a short time he was readmitted to the University, and studied under another tutor, named Tovey. Some writers affirm that he received corporal punishment by the whip, which was then permitted at the national seats of learning, but there is no good evidence of the truth of this assertion. Notwithstanding every difficulty, Milton increased in learning. When twenty years old he became Bachelor of Arts, and at twenty-three took the degree of Master of Arts with great applause. But he had the mortification of seeing a Fellowship which he much desired bestowed on an inferior. While at Cambridge, he wrote his epitaph on Shakespeare, which was the first of his works that appeared in print; he also wrote, it is said, the "Ode on the Nativity," one of the noblest of all his works, and perhaps the finest lyric in the English language.

Doubtless we shall be excused if we mention here the London and Cambridge Carrier, who flourished at this

time, especially as it is no less a personage than Hobson, the horse-keeper, who gave rise to the well-known aphorism, "Hobson's choice, that or none." He was the originator of livery-stables, and practised his occupation with such success at Cambridge that he often had forty horses in his stables at a time; but although the profits from this source were great, nothing would induce him to cease from driving his waggon himself, to and from the metropolis, which he did regularly for sixty years; and when the plague that broke out at the commencement of the reign of Charles the First caused laws to be enacted prohibiting intercourse between various towns, old Hobson pined for want of his usual occupation, and died of *ennui* at the age of 86. Hobson was a great benefactor of Cambridge, and the excellent water-supply now enjoyed by that town is due to his liberality. Milton appears to have taken a humorous interest in him, which he manifested by writing two elegies in his commemoration. During his university career Milton had friends as well as enemies, for he himself says that at Cambridge he met with more than ordinary favour and respect. Having at the age of twenty-three accomplished all that appeared practicable at the University, our poet left Cambridge, after a residence there of about seven years, and went to live with his parents, who had retired to Horton, Bucks, 17½ miles from London. It had originally been intended that he should become a clergyman of the Established Church, but religious and political scruples long made him hesitate, and at length caused him to decide on not taking that step. His friends then urged him to embrace the legal profession; this, however, he summarily rejected. But although without regular occupation, the sequel of his life sufficiently shows that he had no idea of being useless in his day and generation.

And now, before pursuing this biography further, let us endeavour to form some idea of Milton's appearance

when a young man. We gather from statements by himself and others, that he was a little under the middle height, had light brown hair, a complexion exceedingly fair, an oval face, and dark grey eyes. He was called in his college "the lady," but there was nothing weak or effeminate in his demeanour. An eminent writer says, "His voice was delicate and tunable; it could be firm in the low tenor notes, and carry tolerably sonorous matter." "His deportment," says Wood, "was affable, his gait erect and manly, bespeaking courage and undauntedness." Here Wood apparently follows Milton's own account of himself, where he tells us that in his youth he did not neglect "daily" practice with his sword, and that he was not so "very slight," but that, "armed with it, as he generally was, he was in the habit of thinking himself quite a match for any one, even were he much the more robust, and of being perfectly at ease as to any injury that any one could offer him, man to man."

At Horton, Milton lived from the age of twenty-three to thirty, a period which was not only very important in the development of his mind, but also fertile in the fruits of his genius. He read the Greek and Roman classics, bestowing particular attention on history. Not long after his retirement to the country must have been produced the verses which he contributed to the masque of 'Arcades;' his exquisite masque of 'Comus,' one of the masterpieces of English poetry, was acted by the Earl of Bridgewater's sons and daughter in person, at Ludlow Castle, Michaelmas, 1634; and in 1638, was printed the monody of 'Lycidas,' a refined embodiment of classical fancies in the interwoven melodies of the Italian lyrists. 'L'Allegro' and 'Il Penseroso' likewise, the most beautiful of all descriptive poems, had their birth almost certainly in these few years of calm and pleasant seclusion. The most poetical style of the ancients was adopted and ennobled by Milton in his early efforts, and there are extant,

in his own handwriting, memoranda of a hundred stories from Scriptural and British history, which presented themselves to him when a young man as fit themes for tragedies, and the treatment of which, in several instances, he laid down in outline; and the same paper contains a plan for working into a tragedy or mystery, the incidents which eventually took an epic shape in 'Paradise Lost!'

His residence in Buckinghamshire did not prevent Milton from making frequent visits to London, where he sometimes received lessons from the most distinguished masters in mathematics and music. We visited Horton in May, 1871, and found that the house in which Milton lived seven years, and produced some of the best of his works, had been pulled down about twenty-two years, and a handsome modern residence built in its place. We were informed that this was done by the present owner and occupier of the property, who, it is said, not only pulled down the house but also destroyed every vestige of England's greatest poet. The village is very small, is almost modern in its appearance, and contains more than the usual proportion of gentlemen's residences. The church, however, is decidedly old, and is covered with remarkably fine ivy; in the churchyard are two yew-trees which, doubtless, gave shade to Milton, during the production of his immortal lays. The larger of the trees is 13½ feet round, and its branches extend to a distance of 33 feet from the trunk. Wooden planks are in many instances used instead of tombstones, some of them being seven feet long.

Horton is not connected with the metropolis—by railway or coach—but it is only two miles from the Datchet Station of the South-Western line, and three from Langley Broom (sometimes called Langley Marsh) on the Great Western.

In 1638, soon after the death of his mother, who was probably buried at Horton, although her grave

cannot now be traced, Milton obtained permission of his father to travel on the Continent and accordingly set out, accompanied by a man-servant, and provided with several introductions to influential persons.

On arriving at Paris he was introduced by the minister of England, Lord Scuddimore, to the eminent Grotius. This distinguished scholar, although a native and citizen of Holland, was then the Ambassador of Queen Christina of Sweden at the court of France; and it is to him that the world is indebted for the book which has been taken by common consent as the basis of international law. Milton did not stay long in Paris; one week there was quite enough for him, as he neither liked the manners nor the genius of the people. After passing through France by short stages he visited Genoa and Florence. In the latter place he stayed two months, and formed the acquaintance of several eminent men, among whom was the great Galileo. This renowned astronomer was then about seventy-four years old, and had just become totally blind, in which state he continued until his death, which took place four years later. Neither scientific attainments, nor physical affliction, could shield Galileo from the persecutions of fanatical bigots, and accordingly we find that at the time of Milton's visit he was a prisoner in his own house, under the charge of the Inquisition. The impression made on Milton's mind by the deplorable position of the sightless philosopher was deep and lasting, as is shown by several allusions to it in his works, and we may be sure that the feeling was increased tenfold, when "light, the prime work of God," was denied to himself. While in Florence, it is said, that Milton fell in love with a young lady of great beauty and merit, to whom he addressed the following verses in Italian, with which language he was then imperfectly acquainted:—

"When in your language, I unskill'd, address
The short-pac'd efforts of a trammel'd muse;

Soft Italy's fair critics round me press,
And my mistaking passion thus accuse.

"Why, to our tongue's disgrace, does thy dumb love
Strive in rough sounds, soft meanings to impart?
He must select his words, who speaks, to move:
And points his purpose at the hearer's heart.

"Then, laughing, they repeat my languid lays—
Nymphs of thy native clime, perhaps they cry,
For whom thou hast a tongue—may feel thy praise:
But we must understand ere we comply.

"Do thou, my soul's soft hope! these trifles awe:
Tell them, 'tis nothing how, or what I writ;
Since Love, from silent looks, can language draw,
And scorns the lame impertinence of wit."

Milton next went to Rome, where he was courteously received by the most influential persons, amongst whom was Cardinal Barberini, afterwards Pope Urban the Eighth. He thence proceeded to Naples in company with a hermit, who was the cause of his being introduced to Manso, Marquis of Villa, the patron of Tasso. The marquis treated Milton with distinguished kindness, and like many other learned Italians composed verses in his honour. This courtesy Milton was not slow to reciprocate, and it is universally admitted that in these friendly competitions our countryman invariably carried off the palm. While in Naples Milton heard from England of the growing misunderstanding between the king and Parliament, and having too much principle to be indifferent to politics, and too much courage to be absent from the post of danger, he determined to relinquish his plan of travelling in Greece and other countries, and to repair at once to London. He, therefore, immediately commenced his homeward journey, and having passed through Rome, and paid a flying visit to Venice, he arrived at Geneva, where he stayed a short time. Although his reception in Italy was most flattering, his homeward journey was not without danger; his honesty of speech had offended the ultra ecclesias-

tics, and he was warned that the Jesuits were plotting some mischief against him. As, however, he never courted controversy, although his convictions obliged him not to shrink from it when pressed, his prudence prevented the ripening of their machinations, and no harm befell him. On quitting Geneva he hastened to England, through France, as fast as the travelling appliances of those days would permit, and now, on welcoming Milton again to his native shore, after an absence of fifteen months, we cannot do better than transcribe what he says himself as to his conduct while abroad: "I again take God to witness," he writes, "that in all those places, where so many things are considered lawful, I lived sound and untouched from all profligacy and vice, having the thought perpetually with me, that though I might escape the eyes of men, I certainly could not the eyes of God." We behold our man of genius, at the age of thirty-two, in the city of London, in lodgings for a time at the house of one Russell, a tailor, in St. Bride's Churchyard, Fleet Street, attending to the education of his nephews, John and Edward Philips, and diligently watching the political horizon. Here he formed the acquaintance of Patrick Young, librarian to Charles I., and although Milton and Young differed widely on matters of State-policy, yet they were united in a common love of literature. Soon after his return to England he heard of the death of his friend Charles Diodati, of whom we have already had occasion to speak, and whose loss Milton deplores in his elegant 'Epitaphium Damornas.' Finding his apartments too small, Milton took a house, which is described as being "a pretty garden-house in Aldersgate Street, at the end of an entry, and therefore the fitter for his turn, by reason of his privacy; besides that there are few streets in London more free from noise." Here he increased the number of his pupils, and seems to have carried out with success some of the principles afterwards commu-

nicated to the world in his 'Tractate of Education.' These principles seem to consist in the development of thought in preference to the cultivation of memory. His aim was to make really God-fearing citizens, with sound heads and healthy bodies.

In 1641 Milton began his prose writings by the publication of his first controversial work, entitled 'A Tractate of Reformation,' which was immediately followed by 'Prelatical Episcopacy,' the reason of church-government urged against prelacy; and some animadversions on a tract by Bishop Hall. In the next year appeared his 'Apology for Smectymnuus,' the cognomen of certain writers of the puritan party. All these works were decidedly in favour of the puritans, to whose cause he was ardently attached. Amid his varied occupations, however, Milton managed to find time to pay his addresses to a lady, to whom he was married about the year 1643, when he was thirty-five years old. The fair one of his choice was Mary, the daughter of Richard Powell, Esq., a justice of the peace, of Forrest Hill, about three miles from the city of Oxford. The members of this lady's family were staunch royalists, which makes Milton's choice appear somewhat strange, especially as we find that his wife had scarcely lived with him a month when she left, and returned to her father's house, utterly refusing to live with him, though strongly urged by her husband to do so. This conduct greatly incensed Milton, and caused him to devote special attention to the consideration of the law of divorce, and the result of his thoughts we have in four treatises, in which he maintains the lawfulness of divorce for disobedience, and for other causes short of matrimonial unfaithfulness. Whatever may have been thought of these books at the time, it is certain that they have exercised considerable influence, especially of late years, on the legislation of this and other countries. Milton was not a man to be content with mere theories, and therefore, having publicly disowned his wife, and justified him-

self in print, he proceeded to pay his addresses to another lady, who was the daughter of Dr. Davis. This step had a most unlooked for effect on his wife, who, being seized with remorse, or some other feeling, managed to obtain access to her husband at the house of a friend in St. Martin's-le-Grand, and throwing herself at his feet passionately implored his forgiveness. This was too much for Milton; his head was strong enough to contend with the whole world united, but his heart was as soft as a child's; he therefore lovingly received back his erring spouse, and we hear no more of any breach in their domestic peace. It may, however, be remarked, that he never received the whole of the dowry promised at the marriage. About this time appeared the greatest of Milton's prose works, being an appeal to all parties for the freedom of the press. It was entitled 'Areopatica, a Speech for the Liberty of Unlicensed Printing to the Parliament of England;' a work which contains in the same space more passages of surpassing eloquence than any other which proceeded from his pen, or from that of any other writer, ancient or modern. He now removed with his father, who had been living with him for some time, to a larger house in Barbican, where once stood the city watch-tower. Here he generously afforded shelter to his wife's parents and brothers, who were hiding for fear of punishment from the Parliament, which was now triumphant. Milton not only gave them an asylum, but eventually obtained a pardon for them, as he did also for his own brother, and many others. It is believed that both his father and step-father died at this residence.

The house in Barbican, pointed out by tradition as that in which the poet resided, was No. 17. For many years it was occupied by a dyer, until 1864, when it was purchased by the Metropolitan Railway Company for £3250.

We visited this house in May, 1867, and found it in

course of demolition, but many of the apartments still existed. What our feelings were, when sitting in the room where this great and good man wrote some of his works, and where he afforded the shield of his protection to those who had so grievously wronged him, can be more easily imagined by the reader than described. We cut a small piece of wood from the oldest part of the house, which will ever be preserved as a sacred relic. The house was pulled down in 1869, it being condemned as unsafe by the district surveyor, owing to the foundation having been weakened by the works of the Metropolitan Railway.

A humorous incident is connected with the demolition of this building. The name of the dyer who last occupied it was Heaven. On quitting he posted a notice to inform the public that his business was removed. The two most prominent words in the notice were his name and the word "removed," so that the only words that caught the attention of the ordinary passer-by were "Heaven removed." This, as may be imagined, caused no little merriment, for the most grave persons were struck with the circumstance that the house of the author of 'Paradise Lost' should have the announcement upon it of "Heaven removed!"

In 1643, Milton removed from Barbican to a smaller house in High Holborn, the back of which looked into Lincoln's Inn Fields. Here he devoted himself to study, and nothing for some time appeared from his pen. About this period his sight began to fail, and in 1644, when thirty-six years old, his left eye was almost entirely useless. Strong feeling, however, made him, instead of sparing himself, enlarge his sphere of action, and in February, 1649, a few weeks after the execution of Charles I., he published, in defence of that act, a work entitled 'The Tenure of Kings and Magistrates.' In the following month he accepted from the Parliament an appointment as Secretary for Foreign Tongues to the Council of State, which

post was created in consequence of the Government having decided that all treaties with foreign powers should henceforth be made in Latin instead of French, and it may be observed that Latin continued to be the treaty language of England until the beginning of the present century, when French was again employed. For the position in which we now find our author he was pre-eminently qualified, for besides having a thorough knowledge of Latin, Italian, Spanish, and French, he was well acquainted with Greek, Syriac, and Hebrew, and it is not too much to say that Milton was the best English and Latin scholar of his time.

By desire of the Council of State, Milton, without receiving any payment, other than his salary (which was only £280 per annum), composed his 'Eikonoclastes,' being an answer to the 'Eikon Basilike,' which had been published as the work of the unfortunate King Charles I. The Prince of Wales, afterwards Charles II., having taken refuge in Holland, was anxious that a book should appear in defence of his father and the principles of monarchy. He therefore engaged the services of Salmasius, who was considered the most learned author and critic of the day. Salmasius, or Claude Saumaise, was a Protestant native of Burgundy, who had fled to Holland to avoid the persecutions of the French king. He eventually became Professor of Literature and History at the University of Leyden, and acquired a European reputation as "the monarch of learning." To him, as we have seen, the young prince applied, to vindicate with the pen, what the sword had failed to effect in the field. To stimulate his ardour Charles presented him with a hundred jacobuses, viz. £105 sterling, and in consequence soon appeared the work of Salmasius, which was fondly expected to silence Cromwell, and all his adherents. But the Roundheads had men among them with brains, who could use the pen as well as the sword, and no sooner had the book 'Defensio Regis' appeared, than

Milton resolved to answer it. At this time he was weak in body, and dim of sight, but his heart was in the cause, and what was wanting in physical power he supplied by zeal.

Soon was issued Milton's 'Defence of the People of England,' and its praises rang through Europe. Those who opposed its principles admired its style, and even the sovereign then reigning in Sweden, Queen Christina, praised Milton's production in the presence of Salmasius himself. Although much learning was employed in this controversy, it was marred by the presence of a large admixture of personal scurrility.

As Salmasius had received a gift of money from Charles before writing his book, the Parliament of England were not slow to reward Milton after he had so successfully disposed of his antagonist. They accordingly voted him £1000, equal to £3000 of the present day. But although prosperity smiled on our author from without, personal and domestic trials gathered thickly around him.

After residing a short time at Whitehall, he went to live in Petty-France, now York Street, Westminster, where his wife died, leaving him with three children, the eldest not more than eight years old, and, as though that were not enough, his sight that had long been failing, was so overtaxed during the production of the 'Defence of the People of England,' that at length it refused its office altogether, and left its former possessor with "during dark surrounding;" and here we may remark, that according to Aubrey the sight of Milton's mother was so weak that she had to wear spectacles before the age of thirty. Salmasius, in a second work, exulted at Milton's misfortunes; but ere his book was in print he himself was summoned from the arena of strife, it being generally said that he died of a broken heart, caused by the wounds given to his pride by Milton's caustic quill. Milton, after his blindness, replied to Salmasius's second book, and

fully maintained his former reputation. We thus find our author blind at the age of forty-four, a widower with three small children, with the welfare of a great nation depending, to a large extent, on his exertions, and with his health thoroughly broken. But his soul sank not at this accumulation of sorrow; his faith in God was strong, and he set about contending with the various evils as best he might. His first care was for the State, he therefore obtained the appointment of an assistant-secretary to help him in his official duties. This post was held for a short time by the trusty Andrew Marvel. He next procured a second mother for his children, by marrying an amiable lady, Catherine Woodcock, the daughter of Captain Woodcock, of Hackney; and although his family was soon deprived of her loving care, yet her influence for the time seems to have been most salutary. It is remarkable that Milton's first two wives died in childbed, and it may here be named that his third wife, whom he married in 1660, survived him for several years. Her name was Elizabeth Minshall, the daughter of a Cheshire gentleman. The description of the circumstances connected with his becoming blind, and the feelings which actuated him under his calamity, are thus given, in a letter written, about two years after his total loss of sight, to a foreign friend, who had advised him not to give up all hope of recovery, and who had offered to lay his case before an eminent Continental ophthalmic surgeon. Addressing his friend he thus speaks:—

"Known to you only by my writings, and widely separated in our abodes, I was first honoured by your kind correspondence, and afterwards, when an unexpected occasion brought you to London, with the same kindness you came to see me, who could see nobody; one labouring under an affliction which can entitle him to little observation, and may perhaps expose him to some disregard. As, however, you entreat me not to abandon all hopes of recovering my sight, and state

that you have a medical friend at Paris (M. Thevenot), particularly eminent as an oculist, whom you would consult upon the subject, if I would transmit to you the causes and symptoms of the disease, that I may not neglect any means (perhaps divinely suggested) of relief, I will hasten to comply with your requisition.

"It is now, I think, about ten years since I first perceived my sight to grow weak and dim, and at the same time my spleen and other viscera heavy and flatulent. When I sat down to read as usual, in the morning, my eyes gave me considerable pain, and refused their office till fortified by moderate exercise of body. If I looked at a candle it appeared surrounded with an iris. In a little time a darkness covering the left side of the eye (which was partially clouded some years before the other) intercepted the view of all things in that direction. Objects, also, in front, seemed to dwindle in size whenever I closed my right eye. This eye, too, for three years gradually failing, a few months previous to my total blindness, while I was perfectly stationary, everything seemed to swim backward and forward; and now thick vapours appear to settle on my forehead and temples, which weigh down my eyelids with an oppressive sense of drowsiness.

"I ought not, however, to omit mentioning that, before I wholly lost my sight, as soon as I lay down in bed, and turned on either side, brilliant flashes of light used to issue from my closed eyes; and afterwards, on the gradual failure of my powers of vision, colours proportionally dim and faint seemed to rush out with a degree of vehemence and a kind of noise. These have now faded into uniform blackness, such as ensues on the extinction of a candle; or blackness, only varied and intermingled with dimmish grey. The constant darkness, however, in which I live day and night, inclines more to a whitish than a blackish tinge; and the eye turning round, admits, as through a narrow chink, a very small portion of light. But this, though

perhaps it may offer a small glimpse of hope to the physician, does not prevent me from making up my mind to my case, as one evidently beyond the hope of cure; and I often reflect that, as many days of darkness, according to the wise man, are allotted to us all, mine (which, by the favour of the Deity, are divided between leisure and study) are recreated by the conversation and intercourse of my friends, and far more agreeable than those deadly shades of which Solomon is speaking. But if, as it is written, 'Man shall not live by bread alone, but by every word that proceedeth out of the mouth of God,' why should not each of us likewise acquiesce in the reflection, that he derives the benefit of sight, not from his eyes alone, but from the guidance and providence of the same Supreme Being? Whilst he looks out, and provides for me as he does, and leads me about, as it were, with his hand, through the paths of life, I willingly surrender my own faculty of vision, in conformity to his good pleasure; and with a heart as strong and steadfast as if I were a Lynceus, I bid you, my Phalaris, farewell."

It is curious to observe in the preceding letter how keenly Milton appreciates the neglect to which blindness often subjects its victims, and from which the greatness of his talents and reputation could not shield him. It has been well said that we cannot expect too little from man, nor too much from God, within the bounds of his promises, and Milton seems to have been quite of this opinion. The cause of the loss of vision in this case is usually stated to have been 'gutta serena,' but we are inclined to believe from the foregoing description that 'gout,' from which Milton greatly suffered, was the most potent agent. Many persons who only possess a ray of light fondly delude themselves with a hope of obtaining full restoration, and frequently impair their health and waste their means by undergoing fruitless medical experiments. Milton would not thus deceive himself; for we find that, although he could

perceive light, he would not buoy himself up with false hopes, but would face the danger firmly at once. The strong comfort and entire dependence on the will of God, expressed in this letter, are too beautifully stated by the writer to need comment. Lynceus was a hunter of the Calydonian wild boar; he was also one of the Argonauts, and is said in classic fable to have been able to see nine miles through the solid earth. Milton's allusion to him seems to indicate that he wished to convey the idea that he, though blind, could, like Lynceus, see beneath the surface of worldly things.

The following lines were probably written about the same time as the foregoing letter, and they show still further the mind of the author:—

"When I consider how my light is spent
Ere half my days, in this dark world and wide,
And that one talent which is death to hide
Lodged with me useless, though my soul more bent
To serve therewith my Maker, and present
My true account, lest he, returning, chide.
'Doth God exact day-labour, light denied?'
I fondly ask; but Patience, to prevent
That murmur, soon replies, 'God doth not need
Either man's work, or his own gifts; who best
Bear his mild yoke, they serve him best: his state
Is kingly; thousands at his bidding speed,
And post o'er land and ocean without rest;
They also serve who only stand and wait.'"

Three years after his affliction Milton thus writes to his friend Cyriack Skinner, a merchant of London:—

"Cyriack, this three years' day these eyes, though clear,
To outward view, of blemish or of spot,
Bereft of light, their seeing have forgot;
Nor to their idle orbs doth sight appear
Of sun, or moon, or star, throughout the year,
Or man or woman. Yet I argue not
Against Heaven's hand or will, nor bate a jot
Of heart or hope; but still bear up and steer
Right onward. What supports me, dost thou ask?
The conscience, friend, to have lost them overplied
In liberty's defence, my noble task,
Of which all Europe rings from side to side.
This thought might lead me through the world's vain mask,
Content, though blind, had I no better guide."

Milton although exhibiting resignation to the will of his heavenly Father, and manifesting a firm resolve to "still bear up and steer right onward," was not insensible of the greatness of the evils imposed on him by blindness. This is shown by some observations in the preceding extracts, and also by many passages in 'Paradise Lost,' 'Samson Agonistes,' etc., and some of these references to his own feelings it is deemed advisable to transcribe here :—

"O loss of sight, of thee I most complain!
Blind among enemies, O worse than chains,
Dungeon, or beggary, or decrepit age!
Light, the prime work of God, to me is extinct,
And all her various objects of delight
Annull'd, which might in part my grief have eased.
Inferior to the vilest now become
Of man or worm; the vilest here excel me;
They creep, yet see; I, dark in light, exposed
To daily fraud, contempt, abuse, and wrong,
Within doors, or without, still as a fool,
In power of others, never in my own;
Scarce half I seem to live, dead more than half,
O dark, dark, dark, amid the blaze of noon,
Irrevocably dark, total eclipse
Without all hope of day!
O first-created beam, and thou great Word,
'Let there be light, and light was over all;'
Why am I thus bereaved thy prime decree?
The sun to me is dark
And silent as the moon,
When she deserts the night,
Hid in her vacant interlunar cave.
Since light so necessary is to life,
And almost life itself, if it be true
That light is in the soul,
She all in every part; why was this sight
To such a tender ball as the eye confined
So obvious and so easy to be quench'd?
And not, as feeling, through all parts diffused,
That she might look at will through every pore.
Then had I not been thus exiled from light,
As in the land of darkness, yet in light,
To live a life half dead, a living death,
And buried; but, O yet more miserable!
Myself my sepulchre, a moving grave;
Buried, yet not exempt,

By privilege of death and burial,
From worst of other evils, pains, and wrongs;
But made hereby obnoxious more
To all the miseries of life."

Samson Agonistes.

"Thus with the year
Seasons return; but not to me returns
Day, or the sweet approach of even or morn,
Or sight of vernal bloom, or summer's rose,
Or flocks, or herds, or human face divine;
But cloud instead, and ever-during dark
Surrounds me, from the cheerful ways of men
Cut off, and, for the book of knowledge fair,
Presented with a universal blank
Of nature's works, to me expunged and rased,
And wisdom at one entrance quite shut out:
So much the rather thou, celestial light,
Shine inward, and the mind through all her powers
Irradiate; there plant eyes, all mist from thence
Purge and disperse, that I may see and tell
Of things invisible to mortal sight."

Paradise Lost, book iii.

There are also two other poems on this subject written by Milton in his old age, which seem to be connected with a singular incident in the author's life. It is said that the Duke of York, afterwards James the Second, having heard much of Milton, said to his brother, Charles the Second, that he should like to see him. Charles advised him to do so, and accordingly the Duke went with his attendants to Milton's house in Artillery Walk, now that part of Bunhill Row called Artillery Place West, Chiswell Street, E.C. Milton was then advanced in years, and suffering much from gout. The Duke asked him whether he did not consider his blindness to be a judgment, inflicted on him for writing against the late king. "If your highness thinks," he replied, "that the calamities which befall us here are indications of the wrath of heaven, in what manner are we to account for the fate of the king, your father? The displeasure of heaven must have been much greater against him than against me, for I have only lost my eyes,

but he lost his head!" The Duke, disconcerted by the answer, went his way, and exclaimed on reaching the palace: "Brother, you are greatly to blame that you don't have that old rogue, Milton, hanged." "Why, what is the matter, James?" said the king; "you seem in a heat. What! have you seen Milton?" "Yes," answered James, "I have seen him."—"Well," said the king, "in what condition did you find him?" "Why, he is very old and poor."—"And blind too, is he not?"—"Yes; blind as a beetle."—"Why then," observed the merry monarch, "you are a fool, James, to have him hanged as a punishment; to hang him would be doing him a service, it would be taking him out of his miseries; if he is old, poor, and blind, he is miserable enough in all conscience. Let him live!" The two poems that seem connected with this incident, we shall proceed to insert. The first, entitled 'The Sacredness of the Blind,' was not published until the second half of the nineteenth century; it is taken from a manuscript copy, as rendered in the newspapers of the day, but which it is believed has not yet appeared in any edition of Milton's writings; and the second entitled 'Lines by Milton in his Old Age,' was discovered about the same time, and published in an Oxford edition of the poet's works.

The Sacredness of the Blind.

"And surely we, the blind, are not the least care of God. Woe, woe to him who mocks—to him who harms us. *Us*, whom the Divine law, the Divine power, has not only shielded from injury, but has almost rendered sacred! He seems, indeed, to have brought this darkness upon us, not so much by the bedimming of our eyes, as by the overshadowing of His heavenly wings; a darkness which He not seldom illumines with interior and far more gracious light. So may I be consummated by this infirmity! So may I thus be irradiated by obscurity!"

'*Lines by Milton in his Old Age.*'

"I am old and blind;
Men point to me as smitten by God's frown
Afflicted and deserted of my mind,
Yet I am not cast down.

"I am weak, yet strong:
I murmur not that I no longer see:
Poor, old, and helpless, I the more belong,
Father supreme! to Thee.

"O merciful One,
When men are farthest, then Thou art most near
When friends pass by, my weakness shun,
Thy chariot I hear.

"Thy glorious face
Is leaning towards me, and its holy light
Shines in upon my lonely dwelling place,
And there is no more night.

"On my bended knee
I recognise Thy purpose clearly shown
My vision Thou hast dimmed that I may see
Thyself, Thyself alone

"I have nought to fear;
This darkness is the shadow of Thy wing,
Beneath it I am almost sacred—here
Can come no evil thing.

"Oh! I seem to stand
Trembling where foot of mortal ne'er hath been,
Wrapped in the radiance of Thy sinless land,
Which eye hath never seen.

"Visions come and go;
Shapes of resplendent beauty round me throng;
From angels' lips I seem to hear the flow
Of soft and holy song.

"It is nothing now,
When heaven is opening on my sightless eyes,
When airs from Paradise refresh my brow,
The earth in darkness lies.

"In a purer clime
My being fills with rapture; waves of thought
Roll in upon my spirit; strains sublime
Break over me unsought.

"Give me now my lyre!
I feel the stirrings of a gift divine;
Within my bosom glows unearthly fire,
Lit by no skill of mine."

Should these verses have been written, as we suppose, in connection with the insult offered by James to Milton, then it is remarkable that the woe denounced by the blind poet should have actually fallen on James, for no greater punishment could have happened to a king and a father, than to see himself driven from his throne by his own daughter; (see the reign of William and Mary;) and, also to have had another daughter, Queen Anne, so undutiful as to accept the throne from which her parent had been exiled, and to repossess himself of which he was then straining every nerve.

Having somewhat digressed from the thread of our narrative, we must now return to the house in Petty France, where we left the great politician and man of letters. The house named was, when Milton inhabited it, next to Lord Scuddamore's. It was ten years ago a small cutlery shop, and is marked in the London handbooks as No. 19, York Street, Westminster. The following inscription may still be found at the back of the premises: "Sacred to Milton, Prince of Poets." There was until a recent period in the garden a cotton-willow-tree, said to have been planted by Milton himself, who, it is well known, was no mean adept in horticulture, but this interesting relic was blown down in 1868. At the time of our visit, May, 1871, the house was in a most wretched condition, being inhabited by the very poorest persons. It was four storeys high, and the basement was used for the sale of fried fish and ginger beer. Why should not these premises be made available for the use of some charitable institution, and thus be kept in decent order and preserved from decay? If the house were purchased by subscription, and given in trust to the Association for Promoting the General Welfare of the Blind, to be let out in tenements to blind workmen at a very cheap rate, its use for such a purpose would be most appropriate, at the same time that it would be secured to the nation as a historical memento.

In 1653, Cromwell having dismissed the parliament and taken the reins of government into his own hands, still retained Milton as Latin Secretary, and some time after employed him to draw up 'A Defence of the War with Spain.'

That the secretaryship was no sinecure, is shown by the circumstance that a delay having occurred in the completion of a treaty with Sweden, the cause assigned was, that Mr. Milton was indisposed. On this the Swedish ambassador is said to have remarked that it was strange there was "only one man in England who could write Latin, and that he was blind." Among the pieces written by our author, about this time, were: 'A Treatise of Civil Power in Ecclesiastical Causes,' 'The Likeliest Means to remove Hirelings out of the Church,' and 'The Present Means and Brief Delineation of a Commonwealth.' It may not be out of place here to remark, that Milton seems to have entertained the opinion that his blindness, heavy though he felt it to be, added new vigour to his genius, which certainly appears to have been the case, as his greatest poetical works and many of his political contributions were produced after loss of sight. Milton's labours as foreign secretary, after he became blind, were of the most ardous character, and his 'State Papers' comprised dispatches to almost every European court. These productions are now very little known; but as the reader may be interested in learning some particulars regarding them, we insert two specimens taken from a little work, published in 1694, entitled 'Letters of State, written by John Milton to most of the Sovereign Princes and Republicks of Europe. From the year 1649, till the year 1659.' The first is a dispatch to the Duke of Savoy, strongly remonstrating against the cruelties practised by him on the Waldenses, and the second is an invitation to Charles Gustavus Adolphus, King of Sweden, to enter into an alliance, offensive and defensive, with

the English government, for the protection of the same oppressed people. Both these dispatches were written in the name of Cromwell, although they emanated from Milton's pen.

The dispatches are as follow, and we give the English translation, *verbatim et literatim,* as published in the volume above named:—

Oliver the Protector, etc. To the most Serene Prince Immanuel, Duke of Savoy; Prince of Piemont, *Greeting.*

"Most Serene Prince,

"Letters have bin sent us from *Geneva,* as also from the *Dauphinate,* and many other Places bordering upon your Territories, wherein we are given to understand, That such of your Royal Highness's Subjects as profess the Reformed Religion, are Commanded by your Edict, and by your Authority, within three days after the Promulgation of your Edict, to depart their Native Seats and Habitations, upon pain of capital Punishment, and Forfeiture of all their Fortunes and Estates, unless they will give security to relinquish their Religion within Twenty days, and embrace the *Roman* Catholic Faith. And that when they appli'd themselves to your Royal Highness in a most Suppliant manner, imploring a Revocation of the said Edict, and that being receiv'd into pristin favour, they might be restor'd to the Liberty granted 'em by your predecessors, a part of your army fell upon 'em, most cruelly Slew several, put others in Chains, and compell'd the rest to Flye into Desert places and to the Mountains cover'd with snow, where some Hundreds of Families are reduc'd to such Distress, that 'tis greatly to be fear'd, they will in a short time all miserably Perish through Cold and Hunger. These things, when they were related to us, we could not chuse but be touched with extream Grief and Compassion for the Sufferings and Calamities of this Afflicted People. Now in regard

we must acknowledge ourselves link'd together not onely by the same tye of Humanity, but by joynt Communion of the same Religion, we thought it impossible for us to satisfie our Duty to God, to Brotherly Charity, or our Profession of the same Religion, if we should onely be affected with a bare sorrow for the Misery and Calamity of our Brethren, and not contribute all our endeavours to Relieve and Succour 'em in their unexpected Adversity, as much as in us lies. Therefore in a greater measure we most earnestly Beseech and Conjure your Royal Highness, that you would call back to your thoughts, the moderation of your most Serene Predecessors, and the Liberty by them Granted and Confirm'd from time to time to their Subjects the *Vaudois*. In Granting and Confirming which, as they did that, which without all question was most grateful to God, who has bin pleas'd to reserve the Jurisdiction and Power over the Conscience to himself alone, so there is no doubt but that they had a due consideration of their Subjects also, whom they found Stout, and most Faithful in War, and always Obedient in Peace: And as your Royal *Serenity* in other things most laudably follows the footsteps of your Immortal Ancestors, so we again and again beseech your Royal Highness not to swerve from the path wherein they trod in this particular; but that you would vouchsafe to Abrogate both this Edict, and whatsoever else may be Decreed to the Disturbance of your Subjects upon the account of the Reform'd Religion; that you would ratifie to 'em their conceded Privileges and pristin Liberty, and command their Losses to be repair'd and that an end be put to their Oppressions. Which if your Royal Highness shall be pleas'd to see perform'd, you will do a thing most acceptable to God, revive and comfort the miserable in dire Calamity, and most highly oblige all your Neighbours that profess the Reformed Religion, but more especially our selves, who shall be bound to look upon your Clemency and Be-

nignity toward your Subjects as the fruit of our earnest Solicitation. Which will both engage us to a reciprocal return of all good Offices, and lay the solid foundations not only of establishing, but encreasing Alliance and Friendship between this Republick and your Dominions. Nor do we less promise this to our selves from your Justice and Moderation; to which we Beseech Almighty God to encline your Mind and Thoughts. And so we cordially Implore Just Heaven to bestow upon your Highness and your People the Blessings of Peace and Truth, and prosperous Success in all your Affairs.

"*Whitehall, May,* 1655."

"Oliver *Protector, to the most Serene Prince,* Charles Gustavus Adolphus, *King of the* Swedes, *Greeting.*

"We make no question but that the fame of that most rigid Edict has reach'd your Dominions, whereby the Duke of *Savoy* has totally Ruin'd his Protestant Subjects inhabiting the *Alpine* valleys, and commanded 'em to be exterminated from their Native Seats and Habitations, unless they will give security to renounce their Religion receiv'd from their Forefathers, in exchange for the Roman Catholick Superstition, and that within Twenty days at farthest; so that many being kill'd, the rest Strip to their Skins and expos'd to most certain destruction, are now forc'd to wander over desert Mountains, and through perpetual Winter, together with their Wives and Children, half dead with Cold and Hunger; and that your Majesty has laid it to heart with a Pious sorrow and compassionate consideration we as little doubt. For that the Protestant Name and Cause, although they differ among themselves in some things of little consequence, is nevertheless the same in general, and united in one common interest, the hatred of our Adversaries, alike insenc'd against Protestants, very easily demonstrates. Now there is no body can be ignorant, that the

Kings of the *Swedes* have always joyn'd with the Reformed, carrying their Victorious Arms into *Germany* in Defence of the Protestants without distinction. Therefore we make it our chief request, and that in a more especial manner to your Majesty, that you would solicit the Duke of *Savoy* by Letters, and by interposing your intermediating Authority, endeavour to avert the horrid Cruelty of this Edict, if possibly, from People no less Innocent then Religious. For we think it superfluous to admonish your Majesty, whither these rigorous beginnings tend, and what they threaten to all the Protestants in general. But if he rather chuse to listen to his Anger then to our joynt Intreaties and Intercessions, if there be any Tye, any Charity or Communion of Religion to be Believ'd and Worshipp'd, upon Consultations duly first communicated to your Majesty and the Chief of the Protestant Princes, some other course is to be speedily taken, that such a numerous multitude of our Innocent Brethren may not miserably Perish for want of Succour and Assistance. Which in regard we make no question but that it is your Majesty's Opinion and Determination, there can be nothing in our opinion more prudently resolv'd, then to joyn our Reputation, Authority, Councels, Forces, and whatever else is needful, with all the speed that may be, in pursuance of so Pious a design. In the mean time we beseech Almighty God to Bless your Majesty."

After the death of the great Protector, Milton still held office under the weak but amiable Richard Cromwell, and during the anarchy that ensued, he exerted all his powers to prevent the return of the Stuarts. For that purpose he wrote several pamphlets, to one of which an answer was published by some one, now unknown, under the offensive title of 'No Blind Guide.' The good fortune of Charles II., and the destiny of these islands eventually prevailing against Milton's utmost efforts, he abandoned the post of Latin

Secretary (after having held it ten years, during seven of which he was totally blind), and concealed himself in the house of a friend in Bartholomew Close, Smithfield, which place, even at the present day, seems well suited for such a purpose. A special indictment was framed against him by the triumphant party; but by some means never explained, it was withdrawn, and Milton received a full pardon. It is, however, probable, that the influence of Sir William Davenant, and other royalists whom Milton had formerly protected, coupled with the poet's great fame, may have produced this result. It has been stated that his friends gave out he was dead, and that they held a sham funeral to distract attention from his hiding-place until his pardon could be procured. Milton did not, however, altogether escape, for on some pretext he was taken into the custody of the Sergeant-at-Arms, and, on his liberation, refusing to pay the customary fees, he and the Sergeant appeared at the bar of the House of Commons, where the matter was settled, doubtless to Milton's satisfaction, as we hear no more about it. But if our author escaped, so did not one of his works, for 'The Defence of the People of England' was ordered to be burnt by the common hangman. It is said that the Government of Charles offered to reinstate Milton as Foreign Secretary, but that he pertinaciously refused; and that being urged by his wife to yield, on the ground that if they wished to live they must go with the times, "You are right, my dear," said Milton, "like all other women, your ambition is to ride in your coach, while mine is to live and die an honest man." Our author, soon after these events, removed to Holborn, near Red Lion Square, and thence to Jewin Street, Aldersgate Street, which takes its name from a Jews' burial ground that occupied the site as early as the twelfth century. He was now reduced to great poverty, so that it was with much thankfulness he accepted the

offer of Mr. Ellwood, a Quaker, to attend upon him daily to read Latin, his reward being the advantage of Milton's conversation. Ellwood was induced to read with an Italian accent, as the ear of the sage was annoyed whenever Latin was spoken with an English pronunciation. He could also tell when his reader did not understand a passage, and would stop him to give copious explanations. Moving from Jewin Street, he went to Grub Street, well known in the last century as the abode of poor authors; and it is remarkable that even before the introduction of printing, writers of A, B, C, books lived there. It is a very humble thoroughfare, and is now named Milton Street. The house in which he is said to have lived is the second on the right side of the way from Fore Street, and is at present a small shop for the sale of sweetmeats. The house is very mean, and never could have been much better, so that the distress of our author, when he lived there, must have been great indeed; especially as there is evidence for believing that he was only in lodgings. This poverty was caused by heavy pecuniary losses, and by his house having been accidentally burnt. But from some unexplained cause a partial revival of his affairs suddenly occurred, which enabled him to take a house in Artillery Walk, now Artillery Place West, which is the half of the eastern side of Bunhill Row, nearest Chiswell Street, E.C. Here he settled for the remainder of his life, and devoted all the energies of his great mind to the production of a work that he had long had in contemplation. In 1642, about twenty years before the date of which we are now treating, he thus speaks in a volume entitled 'The Reason of Church Government urged against Prelacy.' After having promised to undertake something, he "yet knows not what, that may be of use and an honour to his country." "This," says he, "is not to be obtained but by devout prayer to that Eternal Spirit that can enrich with all utterance and knowledge, and sends out his seraphim

with the hallowed fire of his altar, to touch and purify the lips of whom he pleases." "To this must be added," he continues, "industrious and select reading, steady observation, an insight into all seemingly and generous arts and affairs; till which, in some measure be compass'd, I refuse not to sustain this expectation."

We thus see how Milton prepared himself during twenty years for his great task, and having at length resolved on an epic poem consecrated to the service of Christianity, he settled down, in 1662, to the completion of his stupendous undertaking. This work specially occupied him for three years, and resulted in the production, in 1665, of 'Paradise Lost,' a poem never equalled by any composition in ancient or modern times. To attempt to praise such a book would be vain and superfluous, and such an effort might fairly expose us to the charge of wishing to commend ourselves while professing to applaud Milton. All that we can say is, that if any one has not read 'Paradise Lost,' the sooner he does so the better for himself.

Not being sufficiently well-to-do in the world to bear the expense of a secretary, Milton had to trust to his daughters, and to the chance assistance of friends, to get his thoughts transferred to paper. Whenever an idea occurred to him, he immediately pressed into his service whoever might be near, to write it down. His daughters read to him in various languages, but as they could not understand what they were reading, they found the continuous application very irksome which, it is said, greatly grieved their father, who seems not to have entered sufficiently into the position of the young women, but to have had his whole soul entirely engrossed in sublime contemplations. This family difference the stepmother was far from appeasing, and it eventually resulted in the daughters being sent from their home to learn the art of embroidery. It is stated that if Milton had an idea in the night, he had one of his daughters awoke to record it, from which it

may be gathered that his wife was unable to render him any assistance in his literary pursuits. The names of Milton's children who reached maturity were Anne, Mary, and Deborah. With his insatiable thirst for knowledge, and for the prosecution of his work, it can easily be imagined that the poet would hail with joy the acquisition of a disciple who would sympathize with him in his toils, and be thankful to place his eyes and hands at the disposal of the philosopher in return for his unequalled instruction. Such an one was found in Mr. Ellwood, a Quaker, and the sequel proves how fully Milton appreciated his services. In 1665, the plague having broken out in London, Milton accepted the invitation of Ellwood to visit some of his friends in Buckinghamshire, where he finished 'Paradise Lost,' and on putting it into the hands of Ellwood, the latter remarked, "Thou hast said a great deal upon 'Paradise Lost,' what hast thou to say upon Paradise found?" Fully appreciating the force of this suggestion, Milton at once set to work, and produced 'Paradise Regained,' which composition would be the greatest in the world, if 'Paradise Lost' did not exist. Such, at least, is the opinion of critics generally, but it was not entertained by Milton himself, for he constantly gave the preference to 'Paradise Regained.' The house where 'Paradise Lost' was completed, and 'Paradise Regained' begun, still exists at Chalfont St. Giles, Bucks; it is known in the neighbourhood as Milton Cottage. It stands at one end of a quaint little village, the most conspicuous object of which is an immense elm-tree in the centre of the road. The cottage is double fronted, having an apartment on each side of the doorway, and consists of five rooms, viz. two on the basement and three on the floor above, the largest room on the basement is seventeen feet long, eleven wide, and six feet three inches high; the floor is still paved with red bricks, but the adjoining room and passage have recently been boarded. There is a small front

and side garden, containing a well which, doubtless, supplied the poet with water, and there was formerly attached to the house an orchard, which is now separated and let by itself. At the date of our visit, April 29th, 1871, the cottage was occupied by an army pensioner, named Thomas Bell, who, although eighty-five years old, still works at his trade as a tailor; he was a native of the county of Durham, was present at the battle of Vimeira, August 21st, 1808, and fought at Corunna under Sir John Moore, January 16th, 1809, and received two wounds at Salamanca, July 22nd, 1812, which disabled him from further service; the veteran with pardonable pride showed us medals for these engagements and also the flattened bullet extracted from his elbow. T. Bell informed us that although he had lived in the house forty years, there had not been one blind person to visit the place. The aged tenant paid a rental of seven guineas per annum for the cottage, and stated that the average number of visitors (chiefly Americans and Quakers) was forty a year. No book was kept for the names of visitors, but very good photographs of the house were for sale. In all illustrations the cottage looks larger than it really is, the breadth of the front giving an idea of corresponding depth which is not the case, as there are no back premises. Chalfont St. Giles must not be confounded with Chalfont St. Peter, which is two miles distant. The former place is twenty-two miles from London by road, three miles from Amersham, Bucks, and eight miles from Pinner, Middlesex, which is the nearest railway station, and is on the London and North-Western line. On returning to London, Milton published, in 1667, his 'Paradise Lost,' not, however, before it had undergone the severe ordeal of the censorship of the Archbishop of Canterbury's chaplain, in accordance with the law then prevalent, which obliged all matter, before being printed, to be licensed. Among the passages to which objection was made by the functionary, and that were expunged, was the following:—

"As when the sun new risen
Looks through the horizontal misty air
Shorn of his beams; or from behind the moon
In dim eclipse disastrous silence sheds
On half the nations, and with fear of change
Perplexes monarchs."

Being thus obliged to submit to the mutilation of his great work, Milton proceeded to publication, and sold the copyright to Samuel Simmonds, a bookseller, for an immediate payment of five pounds, with a stipulation to receive five pounds more when 1500 copies should be sold of the first edition, and again five pounds after the sale of the same number of the second edition, and another five pounds after the same sale of the third edition. In 1669 he received his second five pounds, and an additional five pounds some time before his death; after which his widow, in 1678 sold the whole of her interest in the work for eight pounds. From this we see that the whole pecuniary advantage reaped by Milton and his family from 'Paradise Lost' is represented by the paltry sum of twenty-three pounds! Truly, writers of the present day should not be discouraged at the small monetary returns they may derive from their works, when they see a production of such transcendent merit realize so little to its great author. It is interesting to find that the original receipt given to Simmonds for five pounds for the copyright of 'Paradise Lost' still exists with Milton's own signature. A few years ago it was in the possession of Samuel Rogers, the poet; who suspended it in his library, side by side with a Bank of England note for one million pounds, thus forcibly showing his high appreciation of the autograph of the inimitable blind bard.

In 1671 were issued 'Paradise Regained' and 'Samson Agonistes,' and in the same year appeared Milton's 'History of England,' up to the Norman Conquest. Here also the awful licenser interfered and cut out several leaves, some of which, however, were preserved, and have since been inserted. On the

'History of England' Milton bestowed great labour, but owing to the difficulty he experienced in consulting a variety of authors with the sighted assistance at his disposal, he never went beyond the first volume. To the same cause may also be ascribed the non-appearance of his Latin Dictionary, three manuscript folios of which were made use of in the 'Cambridge Dictionary,' published 1693, some years after Milton's death. And here it may be observed that if Milton had possessed a method of making tangible memoranda, his difficulty in taking notes from various authors and recording his own ideas would have been greatly lessened. It seems clear that while Milton was at work on his great poetical compositions he varied his employment by taking in hand the history of England and his grammar, and it is instructive to find how successfully he prosecuted a number of widely different objects at the same time.

In 1673 our author published a 'Summary of Logic,' and also a tract entitled 'A Treatise of True Religion, Heresy, Schism, Toleration, and the Best Means to prevent the Growth of Popery.' In this tract the Church of England is mentioned with respect, and an appeal is made to the Thirty-nine Articles for the confirmation of his views. The principle of toleration Milton holds to be a common agreement in the sufficiency of the Holy Scriptures, and he includes within this pale all Christian sects then known, with the exception of the members of the Church of Rome, whom he excludes on the ground that they appeal to testimonies other than those of the sacred books. Under these circumstances he argues that Roman Catholics should not be permitted the liberty of public or private worship. Without having the least sympathy with the peculiar views of the Roman Catholics, yet we are bound to say that, however plausible the foregoing argument may appear, it cannot induce us to prefer Milton's principle of toleration to that laid down by

Christ himself, viz. "Thou shalt love thy neighbour as thyself;" and it is much to be regretted that any one endowed with such high powers, and who contended so well for the all-sufficiency of the Scriptures, should have overlooked such an important part of their contents as that which lays down in language so explicit and unmistakable our duty to our neighbour. Milton's 'Latin Letters and Juvenile Exercises,' written while at college, were published in 1674, in which year also appeared his last work; viz. 'A Translation of the Polish Declaration in Favour of John III.' (the famous John Sobieski), who had just been called to the throne of Poland after inflicting a signal defeat on the Turks.

By the help of Richardson, and other biographers, we are enabled to obtain a glimpse of Milton's every-day life, during his latter years, while residing at Artillery Walk. We find that he rose at five o'clock in summer, and six in winter; had a chapter of the Hebrew Bible read, then meditated till seven; listened to reading till twelve, then took exercise, and sometimes a swing in a particular kind of chair in his little garden. After a frugal meal he enjoyed some music, playing himself on the organ. At six Milton received friends, among whom were frequently seen men remarkable for birth and talent. He took supper at eight, and then, having smoked a pipe and taken a glass of water, retired to rest at nine. In addition to availing himself of the help of friends, Milton sometimes hired boys to read to him.

Foreigners of eminence often sought the poet out, and before the house in Bread Street was destroyed by the fire of London, they frequently gratified their curiosity by visiting his birthplace. Milton was often seen sitting at the door of his small house in Artillery Walk, clothed in a grey coat of coarse cloth in warm sultry weather, to enjoy the fresh air, looking pale but not cadaverous. When receiving visitors he was

dressed in black neatly enough, and conversed cheerfully with seriousness and point. It is said that the walls of his room were covered with rusty green, which gives some idea of the apartment in which he usually sat. Milton suffered exceedingly from gout, his hands being covered with chalk-stones, and it is affirmed that he sometimes said, "if it were not for the gout his blindness would be tolerable." Among his distinguished visitors Dryden was frequently to be numbered, and on one occasion he asked to be allowed to put 'Paradise Lost' into dramatic rhyme, when Milton with much civility told him that he would give him leave "*to tag* his verses." And now we approach the end. It must be,—but yet we are loth to come to the close of our hero's mortal career. We must, however, write that Milton died on Sunday, November the 8th, 1674, being in his sixty-sixth year. It does not appear that his departure was foreshadowed by more than his usual pain, but it seems that he sank from gradual exhaustion, and that his spirit passed quietly away to the presence of his heavenly Father, where all darkness is made light, and where doubt and suffering are unknown.

If the registers are correct, Milton was buried four days after his death, the interment taking place in the chancel of Cripplegate Church, where his father was laid; the daughter of his uncle, Henry Milton, was also buried in this church. Although often neglected in life, yet many persons of eminence attended the poet's funeral in their carriages. Aubrey says that a stone marked the place of his burial, but that it was removed when the two steps of the altar were raised. Although for a long time poor, yet Milton left at his death £1500 in money. He left no will, but his wife sought to establish the validity of a nuncupative will (that is, one made by word of mouth), which would have had the effect of disinheriting his daughters. This attempt, however, failed, as it deserved.

For some time before his death Milton was not on good terms with his children, and spoke to his brother of disinheriting them; what reason existed for this estrangement it is now impossible to say. It is much to be regretted that the house in Artillery Walk, where the poet resided for so many of the later years of his life, cannot now be traced; in fact, it seems almost certain that it was pulled down in the carrying out of the extensive alterations that have evidently been made in the neighbourhood. It has been frequently stated, without contradiction, that about the year 1787, Milton's grave in Cripplegate Church was ruthlessly violated, his corpse made a show for several days, and his hair, and even his teeth sold for profit; it is even said that so far from preventing or punishing the evil-doers, the parish authorities shared in the plunder; we cannot, however, but think the statement exaggerated. It could be wished for the character of humanity, and for the good name of London, that there were no truth in the matter, but the fact has been so persistently maintained, that it is much to be feared the tomb has suffered some violence, more or less.

For many years no memorial was raised in Milton's commemoration. At length, in 1737, one was placed in Westminster Abbey, at the expense of Mr. Benson, of the Imprest or Recruiting office. In 1773 a monumental bust by Bacon was placed near the grave in Cripplegate Church, at the cost of the first Samuel Whitbread, the eminent brewer; and about the year 1868, a brass and a bas-relief was put by Mr. Bassingham in the same church. It may be interesting to name that the same edifice that holds Milton's body, contains also the ashes of Foxe, the author of the 'Book of Martyrs,' and Speed the historian, with a tablet to the memory of the former, and an effigy of the latter. It was in this church also, which escaped the great fire of London, that Oliver Cromwell was married to Elizabeth Boucher, and the churchyard contains the most per-

fect specimen that exists of a bastion, and a fragment of the old wall of London. In 1868, a poem was discovered by Professor Henry Morley, written on the fly-leaf of a book of Milton's Poems in the British Museum. The poem was dated 1647, and signed J. M., which, together with the character of the handwriting, induced the belief that it was a veritable unpublished production of the great Milton, and that he had written it for his own epitaph. The learned at the time of the discovery were much troubled about it, and although *savans* are still divided in opinion, we yet think it desirable to give the composition a place here. The poem referred to is as follows :—

"*An Epitaph.*

He whom heaven did call away
Out of this hermitage of clay,
Has left some reliques in this urn,
As a pledge of his return.

Meanwhile the Muses do deplore
The loss of this, their paramour,
With whom he sported ere the day
Budded forth its tender ray.
And now Apollo leaves his lays
And puts on cypress for his bays;
The sacred sisters tune their quills
Only to the blubbering rills,
And while his doom they think upon,
Make their own tears their Helicon;
Leaving the two-topt Mount divine
To turn votaries to his shrine.
Think not, reader, me less blest,
Sleeping in this narrow chest,
Than if my ashes did lie hid
Under some stately pyramid.
If a rich tomb makes happy, then
That bee was happier far than men,
Who, busy in the thymy wood,
Was fettered by the golden flood,
Which from the amber-weeping tree
Distilleth down so plenteously;
For so this little wanton elf
Most gloriously enshrined itself.
A tomb whose beauty might compare
With Cleopatra's sepulchre.

In this little bed my dust
Incurtained round I here intrust;
While my more pure and noble part
Lies entomb'd in every heart.
Then pass on gently, ye that mourn,
Touch not this, my hallowed urn;
These ashes which do here remain
A vital tincture still retain;
A seminal form within the deeps
Of this little chaos sleeps;
The thread of life untwisted is
Into its first existences;
Infant nature cradled here
In its principles appear.
This plant, though entered into dust,
In its ashes rest it must
Until sweet Psyche shall inspire
A softening and ætific fire,
And in her fostering arms enfold
This heavy and this earthly mould.
Then as I am I'll be no more
But bloom and blossom (as) (before)
When this cold numbness shall retreat,
By a more than chymick heat.

J. M., Ober. 1647."

We cannot quit this biography without referring to a subject of considerable importance: Arians, and those of various shades of opinion, who dissent from the Christian tenet of the Unity in Trinity of the Godhead, have been much elated by the discovery of a document, supposed to have been written by Milton, entitled 'A Treatise on Christian Doctrine.' This manuscript, written in Latin, was found in 1823, by Mr. Leman, in the State Paper Office, together with corrected copies of some of Milton's foreign dispatches, and several papers relating to the Popish trials and the Rye House Plot, the whole wrapped in an envelope addressed 'to Mr. Skinner, Merchant,' the well-known friend of Milton.

The first question that suggests itself in connection with this matter is, how the parcel came to be in the State Paper Office, as Milton had no connection with that establishment for more than thirteen years before the time when the 'Treatise on Christian Doctrine' is supposed to have been written.

We imagine, however, that the answer to this query must be taken to be that Cyriack Skinner, thinking the papers of national importance, felt it right to transmit them after Milton's death to the public archives. But we are still at a loss to know how any government official could be brought to think a manuscript of a purely theological nature to be a diplomatic document, and as such to admit it to a place among the public records. The only evidence for the genuineness of the book is its resemblance to Milton's well-known style; and although we cannot see that this is a sufficient ground for the conclusion, yet as it is generally received by the learned as an emanation of the poet's brain during the last years of his life, we must accept it as such, although with considerable doubt.

The 'Treatise on Christian Doctrine' was published in 1825, by command of George the Fourth, the translation being entrusted to Charles Richard Sumner, D.D., then his Majesty's librarian, one of the Royal chaplains, and a Canon of Canterbury Cathedral, and subsequently Bishop of Winchester. Both the Latin and the English copies were included in the volume. The treatise, in the opinion of most critics, attests the Arianism of its author, defends the sentiments Milton is well known to have adopted on the subject of divorce; advocates polygamy and anthropomorphism, or the belief of Deity in human form, after the manner of the Greek mythologists. It also supports the theory of the eternity of matter, and contends for the abrogation of the Sabbath. On the whole, the work has disappointed the admirers of Milton. It has few claims to originality either of thought or expression; it was looked for with avidity, but it will ever be read, we are persuaded, with doubt, by those who are at all acquainted with the subjects of which it treats. Altogether the book presents to our view the melancholy exhibition of a great prostrate intellect struggling in the fetters of various and contradictory systems of theology, in an ambitious

endeavour to make a new religion, but if at all accomplishing the object, only succeeding in making one worse than any of those it is intended to supplant.

That Milton, who had ever contended so firmly for the essential doctrines of evangelical truth, should have had his vast intellect so overcome by disease as to have been capable of producing such absurdities as those just named, is pitiable indeed, and it is another warning to mankind not to trust their happiness in this world, or their salvation in the next, to the direction of any human being, however lofty his powers. But we gladly turn from what Milton is supposed to have written when his whole system was racked with pain, and prostrated with weakness, to his productions under more happy auspices; and as a great deal has been made of what he is imagined to have said against the Trinity, attention is now especially directed to what he wrote on the same subject in 'Paradise Lost' and 'Paradise Regained,' a few of which passages are subjoined:—

"On his right
The radiant image of his glory sat,
His only Son;"—*Paradise Lost*, book iii. l. 62–64.

"Thus to his only Son foreseeing spake:
'Only begotten Son, seest thou what rage
Transports our adversary?'"—*Ib.* l. 79–81.

"Beyond compare the Son of God was seen
Most glorious: in him all his Father shone
Substantially express'd;"—*Ib.* l. 138–140.

"By merit more than birthright Son of God;"—*Ib.* l. 309.

"Hail, Son of God, Saviour of men! Thy name
Shall be the copious matter of my song
Henceforth, and never shall my harp thy praise
Forget, nor from thy Father's praise disjoin."—*Ib.* l. 412–415.

"This day I have begot whom I declare
My only Son."—*Ib.* book v. l. 603–604.

"'Son, thou in whom my glory I behold
In full resplendence, heir of all my might,"—*Ib.* l. 719, 720.

"Canst thou with impious obloquy condemn
The just decree of God, pronounced and sworn,
That to his only Son, by right indued
With regal sceptre, every soul in heaven
Shall bend the knee, and in that honour due
Confess him rightful king?"—*Ib.* l. 813–818.

"Dost thou count,
Or all angelic natures join'd in one,
Equal to Him begotten Son? by whom,
As by His word, the Mighty Father made
All things, even thee: and all the spirits of heaven."—*Ib.* l. 833–837.

"Thou Spirit, who ledst this glorious eremite
Into the desert, his victorious field,
Against the spiritual foe, and brought'st him thence
By proof the undoubted Son of God, inspire,
As thou are wont, my prompted song, else mute."—*Paradise Regained*, book i. l. 8–12.

"Gabriel, this day by proof thou shalt behold,
Thou and all angels conversant on earth
With man or men's affairs, how I begin
To verify that solemn message, late
On which I sent thee to the virgin pure
In Galilee, that she should bear a Son
Great in renown, and call'd the Son of God;
Thou toldst her, doubting how these things could be
To her a virgin, that on her should come
The Holy Ghost, and the power of the Highest
O'ershadow her."—*Ib.* l. 129–139.

"By voice from heaven
Heard thee pronounced the Son of God beloved."—*Ib.* book iv. l. 512, 513.

Any comparison of the foregoing extracts with the doubtful treatise ascribed to Milton would be quite out of place. We must, nevertheless, say that whoever can prefer the absurdities about polygamy, the destruction of the Sabbath, the heathen mythology, and the Arian creed contained in the so-called 'Treatise on Christian Doctrine,' to the sublime observations here quoted, is to be pitied indeed. The last known survivor of Milton's family was his granddaughter, named Elizabeth Foster, who in 1750 kept a chandler's shop at Holloway, and for whose benefit the 'Mask of Comus' was performed at

Drury Lane Theatre, at the instigation of Dr. Johnson, who not only wrote a prologue for the occasion, but also sent the following letter to the 'General Advertizer,' viz.:—

"Sir,—That a certain degree of reputation is acquired merely by approving the works of genius, and testifying a regard to the memory of authors, is a truth too evident to be denied; and, therefore, to ensure a participation of fame with a celebrated poet, many who would, perhaps, have contributed to starve him when alive, have heaped expensive pageants upon his grave. It must, indeed, be confessed that this method of becoming known to posterity with honour is peculiar to the great, or at least to the wealthy; but an opportunity now offers for almost every individual to secure the praise of paying a just regard to the illustrious dead, united with the pleasure of doing good to the living. To assist industrious indigence, struggling with distress, and debilitated by age, is a display of virtue, and an acquisition of happiness and honour.

"Whoever, then, would be thought capable of pleasure in reading the works of our incomparable Milton, and not so destitute of gratitude as to refuse to lay out a trifle in rational and elegant entertainment, for the benefit of his living remains, for the exercise of their own virtue, the increase of their reputation, and the pleasing consciousness of doing good, should appear at Drury Lane Theatre to-morrow, April 5, when 'Comus' will be performed, for the benefit of Mrs. Elizabeth Foster, granddaughter to the author, and the only surviving branch of his family.

"N.B. There will be a new prologue on the occasion, written by the author of 'Irene,' and spoken by Mr. Garrick; and, by particular desire, there will be added to the Masque a dramatick satire, called 'Lethe,' in which Mr. Garrick will perform."

It is remarkable that Milton produced his greatest works after having been blind for several years. Some

writers, indeed, have tried to make it appear that he wrote the greater part of 'Paradise Lost' while yet possessing sight, but for this assumption there is not the smallest ground, and its being advanced is not at all creditable to its authors.

Milton, having possessed vision for more than forty-four years, was enabled to collect a mass of information of a kind that never could have been obtained by any one blind from infancy; but there is every reason to believe that if he had not lived for the last twenty-two years of his life in a darkened state, the best fruits of his labours would have been lost to mankind. If he had been able to see, it is probable he might not have been pardoned by the king; or his ardent spirit might have induced him to follow the example of so many of his compeers, and seek a home in New England. He might, again, have had the opportunity, and have been content, to have remained in the land of his forefathers, but his love of political life would certainly have been a snare to him. If bent on retiring from public view, and devoting himself exclusively to the peaceful walks of literature, the desire to carry out his dictionary and history of England would have interfered greatly with his poetical genius. As a sighted man, he would not have possessed the powers of concentration necessary to enable him to produce the inimitable 'Paradise Lost' and 'Paradise Regained.' In a word, Milton would never have been what he was unless he had possessed the advantages arising from the possession of sight, and also those which spring from blindness, and it must be generally admitted that the world has only seen one other author at all equal to Milton, viz. Homer; and he, too, was without sight. Under these circumstances, the blind in all ages have a right to expect to receive from their seeing brethren a fair opportunity for the development of the abilities which God, in his infinite mercy, has vouchsafed to them.

De Valbonais, the Historian.

Bourchenu de Valbonais was born at Grenoble, in the south of France, in 1651, and was present when twenty-one years of age at the indecisive naval engagement of Solbaye, fought between the English and French on the one side, and the Dutch on the other, soon after which battle he lost his sight. This calamity, however, while it cut him off from warlike pursuits, did not prevent his embarking in literary undertakings. He published a history of Dauphinay in two volumes folio, and also a compilation of the genealogies of the nobility of that province. It is to be regretted that more is not known of his life; but the above circumstances are deemed of sufficient importance to be recorded here.

Nicholas Saunderson, LL.D., F.R.S.

This eminent mathematician and natural philosopher, was born at Thurlston, in Yorkshire, in 1682, eight years after the death of Milton. Before the age of one year Nicholas was attacked with small-pox, which not only deprived him of sight, but also destroyed his eye-balls. His father was in comfortable circumstances, being in the excise and having a small private property. A large family, however, prevented his incurring any considerable expense on account of his son Nicholas; he nevertheless did all that he could for him, and finding that he had a taste for figures, he early initiated him into the details of mental arithmetic, in which the blind son made such progress that he soon excelled his father.

When quite young, he was sent to the free school of Penniston, in which parish Thurlstone is situated. Here he acquired the knowledge of the Greek and Latin authors, and obtained that familiarity with sighted persons of his own age, which fitted him in after life to pass through society without diffidence or

embarrassment, and to conduct himself with that easy self-reliance which tends so much to procure success in life. At the age of eighteen he had the good fortune to attract the notice of a gentleman of property, R. West, Esq., of Underbank, who was so much interested in young Saunderson that he himself gave him lessons in algebra and geometry. Dr. Nettleton also devoted much time to the development of the faculties of the blind student; and by the kindness of these two gentlemen in reading to him, Saunderson became acquainted with the writings of the best authors on mathematics and natural philosophy. He went for a short time to a private academy at Attercliff, near Sheffield, to study logic and metaphysics; but these subjects not suiting his taste, he left that establishment, and had as many of his favourite works read at home as circumstances would permit. Some friends having noticed the felicitous way in which Saunderson was accustomed to illustrate the subjects on which he conversed, proposed that he should go to Cambridge, and give lectures to the students in mathematics and philosophy. This plan was eventually carried out, and at the age of twenty-five we find Saunderson in company with his friend Joshua Dunn (a fellow commoner of Christ's College) at the ancient seat of learning, offering himself as a preceptor to the candidates for university honours. Whiston was at that time the Professor of Mathematics, and it might well have been thought that any interference with the privileges connected with his office would have met with some resentment, but no sooner was Saunderson's object made known to him, than he with great generosity expressed his approval of the plan. Saunderson, although not admitted as a member of any educational establishment, was treated with great respect; he was allowed a chamber in Christ's College and granted free access to the library.

It can be well imagined what effect the announcement that a blind man was about to lecture on optics would have on Cambridge students, and accordingly we find that from the first, Saunderson's lectures were attended by crowds of eager listeners. The subject of his discourses was the 'Principia Mathematica—Arithmetica Universalis' of Sir Isaac Newton. It may appear impossible that any one blind from infancy should be able to give an accurate description of the science of optics (or the laws which govern the sense of sight), as a knowledge of light and colour seems to be essential for the performance of such a task; but when it is remembered that optics is entirely based on mathematics, and that it is taught by the theory of lines, it can be easily understood how any one without vision, possessed of the necessary mental qualifications, may understand the principles and demonstrate to others the laws of this science.

While thus employed in explaining the Newtonian philosophy, Saunderson had the honour of being introduced to its illustrious founder. He was also intimately acquainted with the other eminent mathematicians, Halley, Cotes, and De Moivre. On the expulsion of Whiston from Cambridge, on a charge of Arianism, the influential members of the university endeavoured to obtain the appointment of Saunderson to the vacant chair, but as the professorship could not be held by any one who had not obtained a degree, a petition was presented to the Crown supported by the influence of Sir Isaac Newton, praying that a degree might be conferred on Saunderson by royal prerogative, which led to his being created a Master of Arts, by Queen Anne, in 1711, and to his installation as Lucasian Professor of Mathematics in the University of Cambridge, which important event occurred when he was twenty-nine years of age. His inaugural speech was in classical Latin, after the style of Cicero, of whose works he possessed considerable knowledge.

In 1723, Saunderson entered into the marriage state, by being united to a daughter of the Rev. Mr. Dickens, rector of Boxworth, seven miles from Cambridge, and the fruit of this marriage were a son and daughter, both of whom survived their father.

When George II. visited Cambridge, in 1728, the year after his accession to the throne, he sent for Saunderson to the senate house, and created him Doctor in Laws. This honourable title our blind professor adorned by his labours, his time and thoughts being wholly absorbed in the discharge of his duties at the university; and it may be mentioned that he was admitted a Fellow of the Royal Society in 1736. There were many things said of Saunderson, such as his being able to perceive objects at a distance, and to tell when a cloud overshadowed the horizon, which appeared miraculous to the narrators, but which were in reality only such powers as are exercised by many intelligent blind persons, for an inquiry into which subject the reader is referred to the part of this work that treats of the corporeal senses.

Saunderson played well on the flute and had a very correct musical ear, being able to distinguish a variation as small as the fifth of a tone. Among the results of his life may be mentioned a tangible arithmetical apparatus, which, although invented simply for his own use, has proved the germ from which have been formed the various appliances for arithmetic now used by the blind. He wrote a work on algebra, which was published in 1740. In 1756, was printed his book on fluxions and Newton's 'Principia,' by the University of Cambridge, and to him also belongs the discovery of the division of the cube into six equal pyramids, having their apices at the centre of the cube, and their bases at the surface, which serves to demonstrate very simply that every pyramid is the third of a prism of the same base and height. It is to be regretted that Saunderson's studies should

have led him exclusively to the consideration of material things, and thus (although his powers of calculation were wonderfully great) he does not appear to have possessed sufficient intelligence to induce him to raise his thoughts from the contemplation of nature to nature's God. The theory of numbers was his deity, and he worshipped it with all his soul. Under these circumstances it is not surprising to find it recorded that he was "rather to be admired as a man of genius and assiduity than to be esteemed for his amiable qualities." He was imperious in temper, and given to violent bursts of passion. So little indeed did he value the great blessings vouchsafed to him, that on his deathbed he challenged the justice of God in having deprived him of sight. Had his parents and friends paid more attention to his spiritual welfare, or had Saunderson possessed a Bible in relief print, it is probable that the great mathematician would also have been an humble and a sincere Christian, but as it was, he was a poor materialist, an eminent one it is true, but still only—a materialist.

Saunderson's constitution was naturally vigorous, but sedentary pursuits brought on numbness in his limbs, from which he suffered for several years; at length, in 1739, mortification attacked one of his feet, and his blood was so vitiated by scurvy, that no aid could be obtained from medicine. On being informed of the near approach of death, he was silent for a time, but soon resumed his accustomed manner. His friends feeling that his days in this world would be very few, requested the Rev. Dr. Holmes to have some conversation with him on religion, which he gladly consented to do, and in consequence Saunderson and the doctor entered into a discussion upon the existence of God, the clergyman beginning by an allusion to the wonders of nature, when the mathematician replied: — "O Sir! do not talk of that magnificent scene which was never presented to

me. I have been condemned to pass all my life in darkness, and you talk to me of marvels which I do not understand, and which prove nothing except to you, and to those who, like you, can see them. If you wish that I should believe in a God, you must make me touch him."—"Sir," replied the minister, "place your hand upon your own body, and you will feel the divinity of God in the wonderful mechanism of your organs." On Saunderson still further expressing his disbelief, the clergyman reminded him of the Christianity of Newton, Leibnitz, Clarke, and other men of high genius, when Saunderson acknowledged that it was indeed presumptuous to deny what Newton admitted; he, however, represented to the minister that the evidence of Newton could not be so convincing to him as that of all nature was to Newton. Having overexerted himself in this interview, Saunderson sank into a delirium for several hours, and he aroused only enough to cry with a dying voice: "Oh, God of Clarke and Newton, have mercy upon me!"

It is refreshing to turn from this picture, and reflect that the temporal and eternal happiness which this philosopher failed to obtain, is within the reach of the poorest and most afflicted of our countrymen, and that while the blind of the present day have Saunderson for an example of patient perseverance and undaunted courage, they have him also as a great warning of how little worldly success can do to promote happiness here, or hope of bliss hereafter. Surely he who reproaches his Maker is sunk in deep depravity. whatever his secular attainments may be. Saunderson died in the fifty-seventh year of his age, and was buried by his own request in the chancel of Boxworth Church, of which parish it may be remembered his step-father was rector.

Leonard Euler, Professor of Mathematics, Member of the Imperial Academy of St. Petersburg, Director of the Royal Academy of Berlin, Fellow of the Royal Society of London, and Corresponding Member of the Academy of Sciences, Paris.

This celebrated analyst was the son of a Protestant minister, and was born near Basle in Switzerland in 1707, the same year as that in which Saunderson commenced lecturing at Cambridge.

Euler did not lose his sight until comparatively late in life; he however, showed so much Christian resignation, and indomitable perseverance during the seventeen years of his blindness, that his memory should not be forgotten by those interested in the subject of which this work treats. After having obtained many literary honours, Euler, when twenty-eight years of age, lost the sight of one eye from having devoted himself too ardently to study in solving a problem in three days, which eminent mathematicians maintained could not be done under several months. In 1766, when in his fifty-ninth year, he lost the use of the other eye, and became totally blind; after the lapse of twelve years, however, he regained his sight in consequence of a skilful operation by Wentzell. But this advantage was of short duration, as owing to want of care in using the newly acquired sense, the malady returned, and he soon became hopelessly blind. Notwithstanding this heavy calamity and his advanced age, Euler did not despair of still being useful in the world. He set about writing a book on algebra, which, by the aid of a tailor's apprentice for an amanuensis, he completed with entire success; and it is said that about this time his memory became stronger.

In 1771, our blind philosopher nearly fell a victim to a fire which destroyed his house, but his life was saved by the courage of his countryman M. Grimm, who bore

him from the premises. Euler after his blindness wrote several works on the moon, and other subjects connected with astronomical and mathematical science. He also furnished to the Academy of St. Petersburg for their annual memoirs, papers sufficiently numerous to extend over a period of twenty years. In these labours he had the assistance of his son and of Messrs. Kraft and Lexell, without the use of whose eyes the observance of the heavenly bodies of which he wrote would have been impossible. The accuracy of the minute calculations, and the soundness of the deductions made by Euler during his blindness, have won the admiration of the learned of his own day, and of succeeding generations. We have confined our observations in this notice chiefly to matters connected with Euler's life during his want of sight, as anything like a history of his entire labours in the cause of science would be foreign to the object of this work. On the 7th of September, 1783, after some calculations on the motions of balloons (then just invented in France by MM. Montgolfier), Euler dined with Lexell, and conversed on the newly discovered planet Herschel, and while playing with his grandchild, who was taking tea, he expired suddenly, and without pain, at the age of seventy-six.

Euler's habits of life were strictly religious, the labours of each day being closed by a chapter from the Bible, and family prayer.

Thomas Blacklock, D.D.

This widely-known scholar and poet was a native of Scotland, being born at Annan in Dumfriesshire, November 10th, 1721.

He was of English descent, his parents being natives of Cumberland. His father was by trade a bricklayer, but possessed more than the average education of his class.

Before the age of six months, Blacklock became blind from smallpox, and a few years later we find his

father and friends reading to him the works of Milton, Spenser, Pope, Addison, and Ramsay. He very early acquired some knowledge of Latin, and about the age of twelve, wrote his first poem, which was addressed to a little girl. When he was about nineteen, his sister was united in marriage to a person of superior social position, which circumstance was eventually of great service to our young author in procuring for him introductions to the learned and influential, but although the ultimate results of the marriage were beneficial, its early history was clouded by a disaster which our blind poet never ceased to lament. The elder Blacklock being informed that a malt-kiln, belonging to his daughter's husband, was giving way, and being animated with a desire to preserve his relative's property, he ventured into the kiln below the ribs to ascertain the nature and extent of the evil, when suddenly the principal beam and eighty bushels of malt fell upon him, and in one moment he was crushed to death. This sad occurrence made a lasting impression on the blind son's mind; as he possessed an exceedingly sensitive nature, and as his father ever evinced the most lively anxiety for his welfare, that such a calamity should have plunged him into the deepest gloom, which returned at intervals during his whole life, can be easily imagined. There is one point, however, in which the father's care was injurious. Blacklock was never allowed to walk abroad without a guide, and this had much to do in producing that timidity of manner and bodily weakness which characterized him in later years. The fond affection that Blacklock bore through life for his father is beautifully shown in the following lines:—

"Where now, ah! where is that supporting arm
Which to my weak unequal infant steps
Its kind assistance lent? Ah! where that love,
That strong assiduous tenderness, which watch'd
My wishes, yet scarce formed, and to my view
Unimportun'd, like kind indulgent heav'n,
Their objects brought? Ah! where that gentle voice,

Which, with instruction, soft as summer dews
Or fleecy snows, descending on my soul,
Distinguish'd every hour with new delight?
Ah! where that virtue, which, amid the storms,
The mingled horrors of tumultuous life,
Untainted, unsubdu'd, the shock sustain'd?
So firm, the oak, which, in eternal night,
As deep its root extends, as high to heaven
Its top majestic rises: such the smile
Of some benignant angel, from the throne
Of God dispatch'd, ambassador of peace;
Who, on his look impress'd, his message bears,
And, pleas'd, from earth averts impending ill."

Soon after the loss of his father, our poet attracted the notice of Dr. Stevenson, of Edinburgh, then visiting at Dumfries. This kind-hearted physician took young Blacklock to the Scottish capital, and in 1741 placed him in a grammar school, where he prosecuted his studies in the learned languages with zeal and success. By the kindness of some of his newly-made friends, the blind student was introduced to the family of the Lord Provost Alexander. The wife of this chief magistrate was a native of France, and it was Blacklock's good fortune to obtain a knowledge of the French language from the instruction given to him by that lady.

When in 1745 the temporary success of Charles Stuart spread alarm through the kingdom, Blacklock, in common with his fellow-students, forsook the halls of learning and returned to his home. Here, however, he was not idle, for in addition to reading various authors he wrote several pieces and made a collection of his poems, which was published at Glasgow in 1746. When the battle of Culloden had trailed the Stuart flag in the dust, and blasted for ever the hopes of despotism in Britain, our poet returned to Edinburgh, and for six years pursued his studies with unwearied assiduity in the celebrated university of that city. He made himself master of the Greek, Latin, and Italian languages, and was also thoroughly skilled in divinity, philosophy, and music. A second edition of his

poems was published in Edinburgh, in 1754, and an edition appeared in London in the same year, with a biographical notice of the author, by Mr. Spence, the Oxford professor of poetry, who also published further editions in 1756 and 1796. An edition was also issued, edited by Mackenzie, in 1793.

The Presbytery of Dumfries in 1759 licensed Blacklock as a preacher of the Gospel in the national church of Scotland, and many sermons were preached by him which received great commendation. In 1762, he married Sarah, the daughter of Joseph Johnson, a surgeon of Dumfries, and a short time after he was ordained minister at Kirkcudbright, to which benefice he was presented by the Crown, at the instance of the Earl of Selkirk. This nomination, which appeared so promising, was attended with unfortunate results. The parishioners disliked Crown nominations; they had also an aversion to Lord Selkirk, and they vented all their indignation on the nominee, poor Blacklock. They complained of his preaching, tried to show that blindness disqualified him for his office, and carried on the contest so bitterly, that at the end of two years our poet was glad to compromise the matter by consenting to receive a small annuity in consideration of his resigning all claim with regard to the parish. Blacklock now returned to Edinburgh, and opened his house for the reception of a few young gentlemen as scholars and boarders. The success which attended him as an instructor of youth is shown by the circumstance that he continued the management of his academy for upwards of twenty-three years. By the interest of Dr. Beattie, Blacklock received, in 1766 or 1767, the degree of D.D. from Marischal College, Aberdeen; and here it may be observed that our poet seems to have been very fortunate in making friends, who were able and willing to promote his interests, and that to the names belonging to this category must be added the important one of Hume, the historian; but

although cultivating the friendship of the powerful, he was not unmindful of those whose fortunes were under a cloud; and it is interesting to mark in connection with this branch of our subject what a close intimacy existed between Blacklock and the poet Burns. Yes! Blacklock the learned, the philosophic, the religious, and the scrupulously moral, was the close friend of Burns, the untutored, the rambling, the careless liver, and the thriftless. If we inquire what were the bonds which united two such opposite characters, the reply is not hard to find; the links that joined them together were genius and the love of truth; and it can easily be imagined that the vigorous and far-seeing effusions of Burns, coupled as they were with a hatred of all kinds of hypocrisy, and a tone which hurled defiance at those who wished to bridle his imagination, must have made a deep and lasting impression on the feeling heart of our blind author. The connection that subsisted between these two remarkable men is well shown in the lines addressed by Burns to Blacklock, of which the following are extracts:—

To Dr. Blacklock, Ellisland, October 21st, 1789.

"Wow!* but your letter made me vauntie!
And are ye hale, and weel, and cantie?
I kenn'd it still your wee bit jauntie
Wad bring ye to:
Lord send you aye as weel's I want ye,
And then ye'll do.

* * * * * *

"But what d'ye think, my trusty fier,†
I'm turn'd a gauger—peace be here!
Parnassian queans, I fear, I fear
Ye'll now disdain me!
And then my fifty pounds a year,
Will little gain me.

"Ye glaikit, gleesome, dainty damies,
Wha, by Castalia's wimplin' streamies,

---

* An exclamation of pleasure. † Brother.

Lowp, sing, and lave your pretty limbies,
Ye ken, ye ken,
That strang necessity supreme is,
'Mang sons o' men.

"I hae a wife and twa wee laddies,
They maun hae brose and brats* o' duddies;
Ye ken yoursels my heart right proud is—
I need na vaunt,
But I'll sned† besoms—thraw saugh woodies,‡
Before they want.

"Lord help me thro' this world o' care!
I'm weary sick o't late and air!
Not but I hae a richer share,
Than monie ithers;
But why should ae man better fare,
And a' men brithers?

"Come, firm resolve, take thou the van,
Thou stalk o' carl hemp, in man!
And let us mind, faint heart ne'er wan
A lady fair;
Wha does the utmost that he can,
Will whyles do mair.

"But to conclude my silly rhyme,
(I'm scant o' verse, and scant o' time),
To make a happy fireside clime
To weans and wife,
That's the true pathos and sublime
Of human life.

"My compliments to sister Beckie;
And eke the same to honest Lucky,
I wat she is a daintie chuckie,
As e'er tread clay!"

Blacklock deeply sympathized with the privations of the blind poor, and ardently longed to see something done for the improvement of their condition. Besides writing on the blind in the article in the 'Encyclopædia Britannica,' he translated from the French a work on the education of the blind by the celebrated Valentine Haüy, the founder of the Paris blind school. He also frequently expressed to Mr. David Miller, himself blind, and to other gentlemen of Edinburgh, his wish to see an institution for the sightless

* Rags of clothes. † Lop. ‡ Twist willow ropes.

founded in that city; and although no establishment was commenced during his life, yet those to whom he had mentioned his wishes eventually succeeded in forming an institution based on his plan. This establishment was designated the "Edinburgh Asylum for the Relief of the Indigent and Industrious Blind," and the governors of that institution would do themselves credit by erecting at the asylum a commemorative bust, or some other suitable memorial of Blacklock, who was not only the originator of their institution, but was also the greatest blind philosopher, poet, divine, and instructor of youth, that Scotland ever produced. In 1787, Blacklock withdrew from the scholastic profession, and lived privately for four years, during which his advanced age and feeble health prevented his accomplishing anything of importance. He died in Edinburgh in 1791, in the seventieth year of his age, after a week's illness from low fever, and was interred in the burying-ground of the chapel of ease of St. Cuthbert's parish, where his widow, who survived him for several years, placed a modest stone to his memory. Of the excellent disposition of this worthy man much has been said, and we think that the insertion in this place of the following passage, from the pen of Mr. Heron, which appeared in the 'Edinburgh Magazine,' will convey a succinct and truthful idea of his charactert. The writer says, "There was perhaps never one among all mankind whom you might more truly have called an angel upon earth than Dr. Blacklock. He was guileless and innocent as a child, yet endowed with manly sagacity and penetration. His heart was a perpetual spring of overflowing benignity. His feelings were all tremblingly alive to the sense of the sublime, the beautiful, the tender, the pious, the virtuous; poetry was to him the dear solace of perpetual blindness; cheerfulness, even to gaiety was, notwithstanding that irremediable misfortune, long

the predominant colour of his mind. In his latter days, when the gloom might otherwise have thickened around him, hope, faith, devotion, the most fervent and sublime, exalted his mind to heaven, and made him maintain his wonted cheerfulness, in the expectation of a speedy dissolution."

With regard to the descriptions of nature that occur in Blacklock's works, a great deal of nonsense has been written, some persons even maintaining that the writer was a prodigy; Dr. Johnson, however, deals so well with this class of dreamers, that we leave them to the tender mercies of that great critic. Boswell says that Johnson talked of Dr. Blacklock's poetry so far as it was descriptive of visible objects; and observed that, "as its author had the misfortune to be blind, we may be absolutely sure that such passages are combinations of what he had remembered of other writers who could see." Johnson further remarked, "That foolish fellow Spence has laboured to explain philosophically how Blacklock may have done, by means of his own faculties, what it is impossible he should do. The solution as I have given it, is plain: suppose I know a man to be lame, that he is absolutely incapable to move himself, and I find him in a different room from that in which I left him; shall I puzzle myself with idle conjectures, that perhaps his nerves have, by some unknown change, all at once become effective? No! Sir! It is clear how he got into a different room, he was carried!"

As a specimen of Blacklock's compositions, we think it desirable to insert the following beautiful verses, which, in addition to showing the genius of the poet, also evince the goodness of his heart:—

A Hymn to Benevolence.

"Hail! source of transport, ever new;
Whilst thy kind dictates I pursue,
I taste a joy sincere;
Too vast for little minds to know,

Who on themselves alone bestow
Their wishes and their care.

"Daughter of God! delight of man!
From thee felicity began;
Which still thy hand sustains:
By thee sweet Peace her empire spread,
Fair Science raised her laurel'd head,
And Discord gnash'd in chains.

"Far as the pointed sunbeam flies,
Through peopled earth and starry skies,
All nature owns thy nod:
We see thy energy prevail
Through Being's ever rising scale,
From nothing ev'n to God.

"Envy, that tortures her own heart
With plagues and ever-burning smart,
Thy charms divine expel:
Aghast she shuts her livid eyes,
And wing'd, with tenfold fury, flies
To native night and hell.

"By thee inspired the gen'rous breast,
In blessing others only blest,
With goodness large and free,
Delights the widow's tears to stay,
To teach the blind their smoothest way,
And aid the feeble knee.

"O come! and o'er my bosom reign,
Expand my heart, inflame each vein,
Thro' every action shine;
Each low, each selfish wish control,
With all thy essence warm my soul,
And make me wholly thine.

"Nor let fair Virtue's mortal bane,
The soul-contracting thirst of gain,
My faintest wishes sway;
By her possess'd, ere hearts refine,
In hell's dark depth shall mercy shine
And kindle endless day.

"If from thy sacred paths I turn,
Nor feel their griefs, while others mourn,
Nor with their pleasures glow:
Banish'd from God, from bliss, and thee,
My own tormentor let me be,
And groan in hopeless woe."

Francis Huber, the Naturalist.

This eminent Swiss was born at Geneva, A.D. 1750, and lost his sight just before reaching man's estate, the cause being attributed to over-study, especially at night. Before becoming blind, he had won the affections of an amiable young lady, Marie Aimée Lullin, the daughter of a Syndic of the canton of Geneva, and when the calamity overtook him, her father wished to break off the engagement, but Marie resolutely persisted, saying, that as she loved him when he was universally admired, she must not forsake him now that he was in real need of her help. Accordingly, when the young lady reached her majority, which in Geneva is at the age of twenty-five, she was married without her father's consent, but a reconciliation with her parent was soon after effected.

Before the loss of sight, Huber had evinced great interest in natural history (which taste he seems to have inherited from his father, T. Huber, who wrote a work on the flight of birds), and now in his blindness he devoted his chief attention to the study of the economy of bees. With such success, indeed, did he pursue this intricate subject, that later investigators have found little to add to his researches. To institute a series of minute inquiries into the nature and habits of a class of insects so surrounded with mystery as that of the family of bees, would seem to require not only great scientific attainments, but also the highest perfection of the visual organs, and it is therefore with great satisfaction we record that what sighted philosophers during many centuries failed to perceive, was discovered by the patient investigations of a blind man. To assist him in his inquiries, Huber trained his servant Francis Burnens accurately to observe and to state facts, and with such zeal was this faithful man inspired, that he willingly braved the stings of whole swarms of bees, wasps, and hornets, to as-

certain or verify circumstances in which his master took an interest; and here we may remark that it is somewhat singular that glass beehives (now in common use) should have been invented by this blind philosopher.

Madame Huber was not only an affectionate wife, but also a patient helper in the intricate details of her husband's studies.

To give *in extenso* an account of the discoveries made by Huber, would be virtually to write a minute description of the genus of insects to the investigation of whose habits he specially devoted himself; suffice it to say, that the first instalment of his works was written in 1792, in the form of letters to Charles Bonnet, under the title of 'Nouvelles Observations sur les Abeilles;' the second and enlarged edition being published in 1814, which was partly edited by his son Peter, who afterwards wrote on ants and other insects. The esteem in which Huber was held by men of science is shown by the circumstance that the celebrated naturalist De Candolle named a new genus of plants after him 'Huberia.' The many advantages possessed by Huber, had, however, one drawback, for they caused him to rely on others for many things in which he should have depended entirely on his own powers. So much indeed was he dependent on extraneous aid, that he could not even walk about a field without having strings to guide him, which were knotted so as to point out particular places. He, however, made one effort for freedom in procuring type and a press, by which he succeeded in printing his own letters, but the difficulty of this undertaking was too much for him, and he ere long gave it up. Huber seems to have led a very happy life, for which he possessed every earthly requisite. His pecuniary resources were ample, the affectionate devotion of his family and friends was unceasing, and his intellectual powers and reputation were of

no ordinary kind; but even with all these blessings how many throw away solid joys to seek some ephemeral gratification! During the last few years of his life, Huber was deprived of the society of his devoted wife, who died at Lausanne, after which event he lived with his daughter Madame de Molin. At the age of eighty-one, only two days before his death, our philosopher thus wrote to one of his friends:—"I can only say to you that resignation and serenity are blessings that have not been denied to me."

John Gough.

This instructor of youth, and writer on philosophical subjects, was a native of Kendal, in Westmoreland. He was born about 1757, and before the completion of his third year he was attacked by smallpox, which deprived him of sight. At the age of six he was sent to the school of the Society of Friends, then under the management of Mr. Rebanks, who seems to have taken great interest in his blind pupil, and to have taught him all that could be communicated to a student without sight, in a school intended for those who could see. Gough subsequently entered on the study of the mathematics, under the guidance of Mr. John Slee, and having reached great perfection in this branch of science, he gradually investigated the various departments of natural philosophy. Having at length satisfied himself and his friends as to his mastery of these difficult subjects, he turned his attention to the education of young gentlemen, and among those also who had the advantage of his instruction may be mentioned Dr. Dalton and Dr. Whewell, and also Messrs. King, Daws, and Gaskin, all of whom became eminent in learning. But it was not alone in the instruction of youth that Gough excelled, he was also a distinguished writer on scientific subjects; and in 'Nicholson's Journal,' and in the Memoirs of the Literary and Phi-

losophical Society of Manchester, may be found many papers contributed by him on statics, hydrostatics, botany, pneumatics, acoustics, mechanics, ornithology, entomology, mathematics, music, scotography (*i.e.* writing in the dark), electricity, magnetism, meteorology, zoology, etc. etc.

This list is sufficient evidence of Gough's great philosophical acquirements, and it also points out a variety of subjects within the range of a student without sight. It may be as well to mention that our author is the greatest known example of a blind schoolmaster successfully instructing sighted pupils in the higher branches of learning.

Gough died in 1825, aged sixty-eight, and was buried in Kendal churchyard.

In connection with the gentleman who is the subject of this article, an anecdote is given, in Wilkinson's 'Tour to the British Mountains,' of a blind man who fell down with dizziness, clung to the earth, and screamed with fear on being at the top of a mountain, and having the surrounding precipices described to him. We must, however, confess that we think this statement greatly exaggerated. That it should have taken place in any degree is to be ascribed to the relaxed nervous system of the sufferer in connection with an imagination of more than ordinary vigour, and it may be taken for granted that such manifestations are not at all common to the blind as a class.

James Wilson.

The remarkable man whose name heads this article was born at Richmond, in the state of Virginia, North America, in 1779, and lost his sight when four years old from smallpox. At the time of the occurrence of the affliction he was on a voyage to England, and had just lost his parents, both of whom died on the passage.

The captain of the ship being obliged to put into an Irish port for repairs, young Wilson was landed at Belfast and placed under the protection of a churchwarden of the town, who entrusted him to a poor woman as a nurse child. His father fought in the American war of independence for the royal cause, and on the triumph of the republican party, he was reduced from the position of a well-to-do landowner to comparative poverty; a sum of money, however, was placed by the captain of the vessel in the hands of the Belfast churchwarden, which sufficed for some time for the maintenance of the poor blind orphan, and prevented his becoming chargeable to the parish.

When Wilson was placed on shore at Belfast he was still suffering from smallpox, and at one time his life was in danger, but owing to the kind attention of his nurse, he was shortly raised from his bed of pain, sound in health, but almost totally blind. The little sight remaining encouraged the hope that one eye might be restored, and an operation nearly produced the longed-for result; but, being soon after knocked down by a cow, he was thereby entirely and irrevocably deprived of sight. The preceding facts are taken from an autobiography of James Wilson, published in 1842, from which book we also think it desirable to make the following extracts, which are calculated to afford information as to the life of the subject of this notice, and also to give an idea of his style :—

"When I was about eight or nine years of age," says Wilson, "I was not only projector, but workman, for all the children in the neighbourhood. I amused myself occasionally in constructing little windmills, cars, and ships. A kind friend made me a present of a little ship, a perfect model of the 'Royal George,' which was lost at Spithead, and this toy was esteemed by me as one of the most precious gifts I could possibly receive. Having made myself perfectly acquainted with its structure, I thought of making one for myself

upon the same principle. I procured a piece of wood, and with no other tools than an old knife, a chisel, and a hammer completed (not, however, without the loss of some blood) my first attempt at ship-building. This pleased my juvenile companions so well that I had every day numerous applications for ships. They procured me the wood, and my ambition was not a little augmented when I found that I was applied to by boys considerably my seniors, and possessing many advantages of which I never had to boast. Before I resigned this trade I completed my fourteenth ship.

"A few years after this event my foster-mother died, and again I was left forlorn and without a friend. In this precarious state, the only means I had of obtaining subsistence were apparently ill-suited to my situation. The reader may, perhaps, smile when I inform him that at this time I was considered by many as a man of letters, and that I earned my bread in consequence of my practical engagement in relation to them.

"This, indeed, was the case; for I was employed to carry letters to and from the offices of the different merchants in the town and neighbourhood. My punctuality and dispatch in this respect were much in my favour, so that I was generally employed in preference to those who enjoyed the use of all their senses. In the course of time my sphere was enlarged, and often, on important business, I have borne dispatches to the distance of thirty or forty miles. This was certainly not a little extraordinary, in a place where the confusion and bustle of business subjected me to so many dangers."

"Being advised to attempt the study of music, I made an almost hopeless effort, as I had no person to instruct me; but, although I could only scrape a few tunes which I had learned by ear, this did not prevent me from being called on occasionally to officiate at dances. I soon found, in consequence of this avo-

cation, that I was exposed to numerous vices. I was obliged to associate with the dregs of society, to witness many scenes of folly and great wickedness, and to stay out late at nights, and thus expose myself to dangers of different kinds. As my feelings were continually at variance with this occupation, which I adopted more from necessity than from choice, I soon gave it up, and composed a farewell address to my fiddle."

"The family in which I lived was both poor and illiterate, and hence I was a considerable time before I acquired any taste for knowledge. They were generous and humane to all who required their help, and were also strictly honest in their dealings, and would not defraud on any account whatever. I am happy to have it in my power to notice these traits of character, which certainly reflect credit on their memories; yet, praiseworthy as these may appear, they were deficient in their duty to me, so far as the improvement of my mind was concerned."

"It was painful, indeed, in my youth, to behold both in towns and villages the ignorance and wickedness which prevailed among children of both sexes—swearing, lying, and throwing stones; and the feelings of the passengers, while walking along, were not only pained by their profane language, but their personal safety was also in danger, from the stones which were carelessly and mischievously flung around. But, thanks be to God, this evil is at length disappearing; the remedy applied has been successful, and that remedy is the Sunday School."

"About this time I began to pay some attention to books; but my first course of reading was, indeed, of very indifferent description, as I was obliged to listen to what was most convenient. However, I made the best of what I heard, and in a short time, in conjunction with a boy of my own age who read to me, I was master of the principal circumstances in 'Jack the

Giant Killer,' 'Valentine and Orson,' 'Robinson Crusoe,' and 'Gulliver's Travels.' The subject of these formed my taste, was swallowed with avidity, and inspired me with a degree of enthusiasm which awakes even at the present day, on hearing a new and interesting work read. These, however, were soon laid aside for novels and romances, several hundred volumes of which I procured and got read in the course of three years; and, although there are few passages out of all I heard then which I think worth a place in my recollection now, yet at that time I was well acquainted with the most interesting characters and events contained in these works." . . .

"I now engaged with Mr. Gordon, editor of the 'Belfast News Letter,' to deliver the papers to subscribers on the days of publication. Half-a-dozen papers and two shillings per week were my wages in this service. The papers I lent to tradesmen at a halfpenny an hour, and when the time allotted to the first set of customers was expired, it afforded me an agreeable exercise to collect and distribute them to others.

"While in this employment I had sometimes to go four or five miles into the country; but, having an accurate knowledge of the surrounding neighbourhood, and being well acquainted with every gentleman's seat in the vicinity of Belfast, however remotely situated from the public road, I was able to execute my business with exactness and despatch."

"I hope the account of the following adventure will be acceptable to my readers, as it will illustrate what I have said respecting my perambulations through the town and neighbourhood where I was reared."

"On a winter's evening, in 1797, as I stood in one of the principal streets, I was accosted by a person, who in the southern accent inquired its name. After I had imparted the desired information, he told me that he was a soldier, and belonged to a detachment of

the Limerick Militia, which had marched into Belfast that day.

"'I went out,' said he, 'to look for the sergeant, to get the pay, and being a stranger in the town, I lost myself; I left my wife and my firelock in the lodging-house, and I forgot the name both of the street and of the people that own the house. I have been wandering about these two or three hours, and nobody can tell me where they are.'

"I inquired if he had observed any particular building near the place where he left his wife. 'I believe,' replied he, 'after turning one or two corners, I observed a church.' I considered for a moment, in which of the streets in that quarter there was a lodging-house, and recollected that a Mrs. Tawny kept a house of entertainment in William Street. I bade him follow me, and took good care to keep before him, that he should not discover that I was blind. At that time there were no houses on the south-west side of William Street; and fronting the houses on the north-east, there was a deep ditch, which served as a receptacle for all the nuisances of the neighbourhood. As the night was very dark, and there were no lamps in that direction, his eyes were of no service to him whatever; consequently he resigned himself entirely to my guidance. We had to cross the puddle already mentioned by six stepping-stones; and though there was no danger whatever of being drowned, it was more than probable that, had the soldier got a dip, his plight, on coming out, would have been far different from that in which he appeared at parade. I groped with my staff for the first stepping-stone, and, getting on it, I took hold of his hand, and bade him put his foot where mine was, warning him, at the same time, of the consequence of not balancing well. In this manner I conducted him from one stone to another, till I landed him safely on the opposite side, and was highly diverted to hear him observe that my eyes

were better than his. I brought him to Mrs. Tawny's, and left him standing at the door, while I went in to make the necessary inquiry. I soon learned that I had guessed right, for I found his wife almost in despair at his absence, but I bade her be of good cheer, for I had brought her husband to her; and so saying, I called him in. His wife was rejoiced to see him again, and saluted him, by crying out, 'Bless me, dear Barney, where have you been? I thought you were lost!'—'Arrah, my dear, I couldn't find my way back,' said he, 'if it hadn't been for this decent man that showed me the house.'—'And more shame for you,' said the landlady, 'for you have your eyesight, and yet you must be guided to your lodging by a blind man.' On hearing this they were both astonished, and began heartily to bless themselves. As their astonishment, however, subsided, the hospitality of their Irish hearts began to display itself; for, on discovering that I was only a mortal being, and partook of the same nature and appetite as themselves, I was cordially pressed to stay and partake of the fare that Barney, in all his peregrinations through the streets, had taken good care to bring safely to his wife. I, however, declined the kind offer, and left them to drink their tea themselves, and enjoy the happiness that succeeds when groundless fears and trivial disappointments have vanished away."

. . . "It was now, indeed, that I was able to appreciate the pleasures of memory in a superior degree, for I knew the names, stations, and admirals of almost all the ships in the navy, and was also acquainted with the number, facing, and name of every regiment in the army, according to the respective towns, cities, or shires from which they were raised. I served, of course, as an army and navy list for the poor in the neighbourhood, who had relations in either of these departments, and was capable of informing them of all the general news. The follow-

ing anecdote shows the powers of my memory at that period. Being invited by a friend to spend an evening at his house, I had scarcely sat down when three gentlemen entered, and the conversation turning on the news of the day, I was requested by my friend to repeat the names of as many of the ships of the British navy as I could recollect, telling me at the same time that he had a particular reason for making the request. I commenced, and my friend marked them down as I went along, until I had repeated six hundred and twenty, when he stopped me, saying I had gone far enough. The cause of the request was then explained. One of the gentlemen had wagered a supper that I could not mention five hundred; he, however, expressed himself much pleased at his loss, having been, as he acknowledged, highly entertained by the experiment." . . . "Although, at this time, I had little relish for any other kind of reading but newspapers and novels, yet I was not wholly insensible to the charms of poetry. I amused myself with making verses at intervals, but I could never produce anything in that way which pleased myself. My acquaintances, particularly the young people, gave me sufficient employment in composing epigrams, love songs, epistles, and acrostics, in praise of their sweethearts. Many of those juvenile productions are still extant, and, though miserable in themselves, continue to find admirers among those classes for whom they were composed.

'The lovely maniac fled the haunts of men,—
Traced the sea-beach, or sought the lonely glen.'

The first of my productions which met the public eye was 'An Elegy on the Death of an unfortunate Female.' This poor maniac was known for more than twenty years in the neighbourhood of Belfast, by the appellation of Mad Mary, and was at last found dead in the ruins of an old house, where she had

taken refuge during a stormy winter night. This little piece being much noticed, on account of the subject having excited a general interest, I was advised to collect my best productions and give them to the public. Encouraged by the patronage of a few generous individuals, I set about the work, which in a few months made its appearance.

"I will now for the amusement of my readers, insert an extract from this little collection :—

'*Verses on the Richmond National Institution for the Blind in Ireland.*

'You from whose eyes the tender tear
Can gently drop for human woe,
Oh! pour your soft compassion here,
And here your generous boon bestow.

'O think what joys to you are giv'n,
Which they must never hope to share;
To view the bright expanse of heav'n,
While sweet emotion speaks in prayer.

'For them the morning's rosy light
In vain the glowing east o'erspreads;
To them the empress of the night
In vain her silvery lustre sheds.

'The blossoms of the scented spring
In vain their silken leaves unfold;
And o'er each mead profusely fling
Their varied tints of living gold.

'In vain the twilight shade descends
In magic softness, pure, serene;
In vain the star of evening blends
Its dewy light to gild the scene.

'Let infidels presumptuous ask,
With reason's boasted pride elate;
But be the Christian's sacred task,
To cheer his brother's hapless fate.

'Be yours, with liberal hand, to prove
The feelings of a grateful mind;
Be yours, by acts of pious love,
To soothe the sorrows of the blind.

'Be his, to speak the Saviour's name
To hearts that catch the joyful sound;

To kindle pure devotion's flame,
And shed immortal glory round.

'Thus, when the veil of darkness spread
In all the gloom of endless night,
"Let there be light," Jehovah said,
Creation heard and all was light.'

"On the above lines the reader is left to comment as he thinks proper. Composed by one destitute of sight, of learning, and even of an intelligent friend who could correct my compositions, they must, of course, stand very low in the scale of merit; still, however, they were of service to me, and I found the public rather disposed to pity, than to censure, an humble individual so far beneath the notice of the critic.

"Lord Cornwallis, who succeeded Earl Camden in the viceroyalty of Ireland, in making the tour of that kingdom, in 1799, arrived at Belfast. This appearing a favourable opportunity, I was determined to petition his Excellency in relation to the losses of my family in America. A petition was accordingly drawn up, stating my father's possessions in that country, his services in the army, and his death on his passage returning to Europe, as already related. This petition I put into the hands of the late George Joy, Esq., who kindly offered to present it, bidding me to call on him the next day; I did so, but, to my utter disappointment, I found that Mr. Joy on dressing for dinner the preceding evening, had unfortunately forgotten my petition in the pocket of his coat which he had worn in the morning. Disappointed in this quarter, I resolved on following his Lordship to Annadale, the seat of the late Honourable Chichester Skeffington, as he had left Belfast for that place at seven o'clock in the morning. I did so, and again I was fated to feel the bitter pang of disappointment; for, on arriving at Annadale I was informed that his Excellency had a few hours before left that for Dublin. Thus ter-

minated the only hope I ever had of obtaining an independence; but, as there was no use in repining, I endeavoured to submit to the disappointment with resignation. At this time I turned my attention to a new occupation, and fixed on that of an itinerant dealer; for this purpose I borrowed a few pounds from a friend, with which I purchased a stock of such hardware articles as might suit the country people.

"Being at the bottom of fortune's wheel, every new revolution might raise me, but could not possibly depress me lower; and hence I commenced my peregrinations in the country. While employed in this way I had an opportunity of meeting with a variety of characters, and of mingling in different societies. It is but justice here to remark that among the peasantry of Ulster, I met with many individuals whose good nature, benevolent dispositions, and kind hospitality were not only an honour to their country, but even to human nature. While vending my hardware through the country, I found this occupation ill-suited to my circumstances; I was exposed to many inconveniences, and experienced much fatigue and distress both of body and mind. The want of sight made it difficult for me to steer my course aright, and I was often exposed both to hardships and danger. Many a time have I heard the thunder roll over my head, and felt the teeming rain drench me from head to foot, while I have unknowingly passed by a place of shelter, or stood like a statue, not knowing which way to turn, though within a few paces of a house." "How different then is my situation from his who has his sight! From the impediments which cause me so much pain he is happily exempt; while he pursues his journey, he can trace the various beauties of the surrounding scenery; the picturesque landscape, the spreading oak, the flowing brook, the towering mountain that hides its blue summit in the clouds, the majestic ocean dashing on the 'shelly shore,' and the vast expansive

arch of heaven, bespangled with innumerable stars, have all, for him, their respective beauties, and fail not to awaken pleasing and agreeable reflections; but to the blind these pleasures are unknown, the charms of nature are concealed under an impenetrable veil, and the God of light has placed between him and silent but animated nature an insuperable barrier."

"In the course of my life I have had many mercies to be grateful for; good health has not been among the least of the blessings I have enjoyed. I am now between sixty and seventy years of age. During the whole of that period I have never had recourse to medical advice. To add to this, I have always been blest with a cheerful and contented mind, with an uncommon flow of spirits. I could laugh and joke with the most of people. Often, in returning, wet and weary, from one of those long journeys which I was obliged to take in search of employment, when seated at my own fireside, surrounded with my family, the toils and fatigues I had undergone were all forgotten, and I enjoyed my frugal meal with a degree of pleasure perhaps unknown to those who dine at the tables of kings and princes. How thankful ought I to be to the Giver of all Mercies, who has looked out and provided for me, as He has done, and has as it were led me about by the hand, from the days of my infancy to the present hour, in health and safety! And in the language of the Psalmist, I can truly say, 'Goodness and mercy have followed me all the days of my life.' Reader! whoever thou art, may thou and I, and all who are near and dear to us in this world, be enabled to realize the concluding sentence of the inspired writer, that is, 'May we dwell in the presence of the Lord for ever.' Amen."

"In the year 1800, there was an institution established in Belfast, for the purpose of instructing those who were deprived of sight, in such employments as were suited to their unfortunate situation; it was

styled, 'The Asylum for the Blind.' As it is of vast importance to the well-being of society, that all who have not independent fortunes should be enabled to support themselves by their own industry, for which the blind are seldom qualified, owing to their unhappy state, and the want of a suitable education, this asylum promised to be of the greatest utility. I was entered on the books of the institution as an apprentice, and continued in it until within a few months of its dissolution. When I left the asylum I proposed working on my own account, and having acquired a partial knowledge of the upholstery business, I was soon employed. My friends exerted themselves on this occasion to promote my interest, and though there were several individuals who had learned the business in the same asylum, and who could work better than I, yet I generally had the preference. Many of my friends went so far as even to contrive work for me, for which they had not immediate use, merely to keep me employed. Although my pecuniary circumstances were not much improved, yet I now experienced a greater share of happiness than I had ever enjoyed before. I was in a situation that afforded me better opportunities of acquiring knowledge than I had ever possessed; previously to this time I also met with much friendship from many to whom I was but very little known; and when it was understood that I was desirous of information, I generally received assistance in this way, even where I could not have expected it; either the lady of the house in which I was employed, or one of the children, generally read to me while I was at work. Thus I improved my mind while labouring for my support.

"Time glided pleasantly away, no room being left for idle speculations or gloomy forebodings. In 1803, a number of young men formed a Reading Society in Belfast, and although they were all mechanics, yet some of them were also men of taste,

and possessed considerable talents. Into this society I was admitted a member, at the same time that I was kindly exempted from the expense attending its regulations. One of the members was a man of the most extraordinary character I had ever known, and therefore I attached myself to him. To good nature he united an original genius, good taste, and great sensibility; and had an early education been his lot, or had his mind been sufficiently expanded by study, he would have become an ornament to society, but he was totally devoid of ambition, and never had a wish to rise above the rank of an humble mechanic. This man proposed to read to me if I could procure books: our stated time for this employment was from nine o'clock in the evening until one in the morning, in the winter season, and from seven until eleven in the summer; when I was not particularly engaged I frequently attended him at other intervals. At breakfast he had half an hour allotted to him, at dinner a whole hour, and every minute of this was filled up, for he generally read to me between every cup of tea. By this means I committed to memory a vast collection of pieces both in prose and verse, which I still retain, and which have been until the present hour a never failing source of amusement to me. The more I heard read, the more my desire for knowledge increased, while I learned at the same time, that 'the more a man knows, he finds he knows the less.' So ardent and steady was my desire for knowledge at that time, that I could never bear to be absent a single night from my friend; and often, when walking in the country, where I could have been comfortably accommodated, I have travelled three or four miles in a severe winter night to be at my post in time. Pinched with cold and drenched with rain, I have many a time sat down and listened for several hours together to the writings of Plutarch, Rollin, or Clarendon. For seven or eight years we continued this course of reading; but to give

a catalogue of the authors we perused in that time, would be foreign to my present purpose; suffice it to say, that every book in the English language which we could procure was read with avidity; ancient and Modern History, Poetry, Biography, Essays, Magazines, Voyages, Travels, etc. were among our studies. How precious these opportunities were, and how dear the recollection of them are to me even now, can only be adequately understood by the few who have realized similar enjoyments, and can indulge in similar recollections. Thus, and otherwise, I was enabled to collect a number of miscellaneous facts in sundry departments of knowledge, but without being in the possession of the links necessary to bind them together, and form them into a connected system. But even as detached facts they were valuable; and when I obtained one fact that seemed new, striking, and important, I felt a thrill to my very soul as if I had found a blessing, and so I had."

"I being poor, and having no books of my own, I was obliged to make my memory my library, and she was ever faithful to the trust committed to her keeping."

"The person to whom I had entrusted the management of my little domestic concerns did not hesitate to take advantage of my ignorance of such affairs, as well as my situation. Many of my friends felt for me and strongly advised me to marry, as I should be more comfortable and be out of the power of such unprincipled people."

"They said that could I meet with a sober, steady woman, who would be likely to make a good wife, the change would be advantageous to me in more respects than one. I objected to this proposal, on the ground of my inability to provide for a family; the precarious manner of earning my subsistence put such a change beyond my expectation,—it was enough for me to suffer alone—I could not think of entailing misery upon others. This they could not deny, but they then reasoned in this way: no one required the kind

assistance of an affectionate wife more than a blind man; but I had not one friend, one relative to look after me. What then would become of me in my old age? I should be helpless in the extreme.

"These and many other arguments were used to induce me to assent to a measure which they thought would finally conduce to my happiness. Their anticipations have since been fully realized,—I am happy. I had the pleasure of being known, for some time, to a young woman who lived in the neighbourhood, having met her occasionally at the house of a friend whom I used to visit. Her plain sense and unassuming manners recommended her to my notice, but what most endeared her to me was her filial piety. Her aged mother and she lived together, loved and respected by all who knew them, and without any other dependence than the work of her own hands, she supported herself and parent. I thought that she, who was such an attentive and feeling daughter, must necessarily make an affectionate wife, and in this opinion I was not disappointed.

"I addressed a copy of verses to her, who had now become the object of my affection, which were printed in the first collection of my poems. They had the desired effect; they produced an impression which never has been, and I may venture to say, never will be effaced. After the expiration of two years our correspondence happily terminated, and we were married on the 27th of November, 1802. . . . . We have had eleven children, of whom four only are now alive, and, with the exception of the diseases common to children, those living are all healthy and stout."

"The first of my literary acquaintances of any respectability was John Lushington Reilly, Esq., of Scarvagh, to whose family I was warmly recommended by a lady who introduced me as a lover and composer of poetry. In this gentleman's house I was employed for some time, and during my residence

there I was not treated as a common workman, but was highly entertained by Mr. and Mrs. Reilly, who had the goodness to read to me by turns whilst I was at work; and in their absence, a person was appointed to supply their place. Here there was a fine library, where I first met with Spenser's 'Fairy Queen.' When I left home I did not expect to remain at Scarvagh longer than three or four weeks at furthest, but such was the partiality of that worthy family for me that I was detained there for nearly three months. On taking leave of my benefactors, Mr. Reilly observed that I ought not to be tired of them as they were not tired of me . . . . The sense of sight is not the only one of which I am deprived, for I never remember to have enjoyed that of smell. In my opinion, this sense can be more easily dispensed with than any of the other four. . . . . I was very fortunate in getting acquainted with a number of individuals whose literary acquirements and love of virtue reflected honour on their names. In the society of such persons I could not fail in acquiring much mental improvement, and their conversation, remarks, and advice were of great use to me.

"The circle of my acquaintance was at this time greatly enlarged, and I had the honour of ranking among my friends some of the most distinguished characters of this country. Among these was Dr. Percy, Bishop of Dromore. This great man was the last of that illustrious school of which Johnson, Goldsmith, and Burke were members. His fine taste, and literary talents were accompanied by sweetness of temper and a benevolent disposition. From the Rev. H. Boyd (a gentleman well known in the literary world, as the translator of the Italian poet Dante, and author of some other original works of great merit), I received the most marked attention. His kindness and that of his family, indeed, I cannot easily forget; on several occasions he has rendered me very essential

services, and it yields me no small degree of pleasure to reflect, that I still enjoy the friendship of a man as eminently distinguished for his virtues as for his talents."

The foregoing extracts are well calculated to give an idea of the difficulties with which the majority of the blind have to contend, but our chief reason for inserting them in this place is the circumstance that James Wilson was the author of a work entitled 'The Biography of the Blind,' which has proved eminently useful in conveying an idea of the influence exerted on the world's affairs by persons without sight, and also in directing attention to the capabilities and requirements of the blind.

The first edition of the book was published in 1820, a second appeared in 1833, a third in 1835, and a fourth in 1838; about seven years after which, it is believed the author died at Birmingham, where he had for some time resided.

For many years prior to his death he maintained himself and a very large family, principally by the sale of his literary productions.

In the list of the eminent blind there are many illustrious and distinguished men, but few could be pointed out who have proved as useful to their suffering brethren as James Wilson.

Holman, the Traveller and Author.

James Holman was born at Exeter in 1786. He early entered the navy, and at the age of twenty-five, being then a lieutenant, lost his sight on the west coast of Africa. For some time after this calamity, he was greatly agitated by the conflicting emotions of hope and fear, caused by the vacillating conduct of his medical advisers. At length he conjured them to be plain with him, saying that he would rather know the worst and bear it, than continue to be tortured by doubt and anxiety. Thus assailed, the ophthalmic

surgeons admitted that his sight was irrecoverably lost, and Holman, bracing himself to the exigencies of the position, determined to make the best of that which he had no power to remedy.

At first he formed the design, as it would appear, of devoting himself entirely to literature, as we find that he entered the University of Edinburgh, and gave himself up for some time exclusively to study. Perceiving, however, that his health gave way, and that the tone of his nervous system was becoming relaxed, he concluded that he was not adapted for sedentary pursuits; and having once become impressed with this idea, he was not long in deciding on his line of action. A love of adventure had always formed a marked trait of his character. While in the navy, he constantly evinced a strong desire to sail round the globe, and now, although bereft of sight and weak in health, he formed the plan of travelling on the Continent in such a way as would leave him the free use of his faculties. His friends strongly opposed the project, and urged him at least to take a servant with him, but Holman, feeling that to have any permanent attendant would simply be to place himself in a state of perpetual tutelage, resolved on travelling alone, and to trust to the soundness of his judgment, the powers of a moderately filled purse, and the probability of obtaining extraneous aid whenever it might be required. Behold, then, the sightless traveller, in the eighth year of his blindness, and the thirty-third of his age, on the 15th of October, 1819 (the anniversary of his birthday, and the same date of the year on which he entered the Edinburgh University), at Dover, on board the packet bound for Calais. In those days no steamboat crossed the channel, and railways were unknown. In proceeding through France by *les diligences*, Holman adopted a singular method to procure exercise, and relieve himself from *ennui*. Alighting from the coach, he took a piece of string from his

pocket, and tying one end to the back of the vehicle, and laying hold of the other, he ran after the *diligence* to the no small amusement of the children of the villages through which he passed. The greatest danger to which he ever seems to have been exposed, occurred in the following way: Holman, when he first went to France, could not speak a word of French, and arriving at Bordeaux, in the *diligence*, he found that all the passengers got out, and left him to shift for himself. It was raining in torrents. In vain he called for help. Presently the *diligence* was surrounded by a noisy crowd of people, talking vociferously, and soon after he was conscious of an extraordinary irregular motion, the people occasionally opening the doors, and turning him from side to side, as if they were shifting him for a balance. He imagined from this singular circumstance that they were taking off the wheels with the intention of putting the carriage under cover. This speculation was soon dissipated, however, by a loud splashing noise of water rising and falling and gurgling about him.

The motion and the noise continued to increase, until at the end of an hour, to his infinite satisfaction, the horses were again attached to the *diligence*, the passengers re-entered, and the party proceeded on their journey.

This mysterious incident was susceptible of a simple solution. It was necessary on reaching the river Dordogne, which flows into the Garonne, at Bordeaux, to transport the *diligence* on a raft down the stream, while the passengers, crossing the river in a ferry-boat, were taken to their destination on the other side in a carriage.

All the time that Holman believed he was sitting in the coach-office yard at Bordeaux, he was making a voyage of four miles on a raft, without having the least suspicion of being the hero of such an adventure.

In 1821 Holman returned to England, and took up

his abode at Travers' College for naval knights at Windsor, which institution was established by the gentleman whose name it bears, for the reception of naval officers with small means. Our traveller in 1812 had been elected by the Crown as one of the poor knights; and although the condition of residents in the college was particularly distasteful to him, yet as the income connected with the appointment was not to be despised, he managed to keep his name on the books, and also to carry out his other plans by getting long periods of leave of absence, and at length he obtained such power at Court that he was enabled to procure a permit with a Royal signature, exempting him from attendance at prayers, though he might be at the time residing in the college.

In 1822 Holman turned author, and published his first volume of travels, entitled 'The Narrative of a Journey undertaken in the years 1819, 1820, and 1821, through France, Italy, Savoy, Switzerland, parts of Germany bordering on the Rhine, Holland, and the Netherlands, comprising incidents which occurred to the author, who has long suffered from a total deprivation of sight, with various points of information collected in his Tour, by James Holman, R.N. and K.W.' This volume having passed through four editions, a fifth was issued in 1834, dedicated to the Princess Augusta, and from the title-page we gather that Holman was then a Fellow of the Royal Society. In 1822 our traveller undertook a journey of the most extensive character. He proceeded to St. Petersburg, and from thence set out with the intention of traversing the whole extent of the Russian empire, and from its eastern extremity to return to England; and thus to accomplish the feat of travelling entirely round the world. This great idea, however, was not destined to be fulfilled, for when Holman had penetrated five thousand miles into the Russian dominions, being two thousand miles beyond Tobolsk, the capital of Siberia,

he was overtaken by a Russian officer with express orders from the Emperor to prevent his going any further, and to bring him back to the Austro-Russian frontiers. The only reason that can be assigned for this summary interference on the part of the St. Petersburg government, is the probability that they did not believe that Holman was blind, but thought that he assumed to be in that condition to cloak some secret design, in which supposition they would be greatly strengthened by the circumstance that Holman did not apply for a passport in the regular way, but kept getting new passports for short distances, instead of obtaining one for the whole journey. His motive for adopting this course was to prevent his friends from being alarmed at the dangers to which he intended exposing himself, but although we can understand his motive, we can also perceive the influence that such proceedings would have on the government of the Autocrat of all the Russias. Being brought back to the frontiers of Austrian Poland, Holman proceeded to Cracow, and from thence through Austria, Saxony, Prussia, and Hanover, where he embarked for Hull, which he reached June 24th, 1824, after an absence from England of two years and one day. The results of this second enterprise of our traveller were published in 1825 in two volumes, dedicated to King George IV., to which were prefixed the following words as a motto:—"The man who is the lord of the land spake roughly to us and took us for spies of the country." The only *contretemps* that happened while Holman was in Siberia, except his being brought back, was rather of a ludicrous character. Dining with the governor of Tobolsk, and hearing a strange sound in the room, he asked what animal that was about as high as the table, which was making a snoring noise like a dog? This question was unfortunate, as the sound proceeded from one of the town councillors, who always made a snuffling with his

nose, and whose stature was so low that he seemed about the height of the table. The way in which the blind traveller felt respecting the interruption of his journey is shown by the following passage:—"On the 19th of July, 1822," he says, "I embarked in the 'Saunders Hill' schooner, commanded by Captain Courtney, then lying in the London Docks, and bound for St. Petersburg, with the ostensible motive of visiting the Russian empire; but my real intention, should circumstances prove propitious, was to make a circuit of the whole world. My motives for concealing so important a part of my views, it will not be difficult to explain; they are attributable to the opposition my kind friends have always been inclined to make against what, under my peculiar deprivation, they are disposed to regard as Quixotic projects; a feeling on their part which I am desirous to suppress, since, on various occasions, I have to charge it with the disappointment of my most anxious wishes. Alas, how little are they able to appreciate my true sentiments and powers, as developing themselves in an intense desire to occupy the mind, to acquire solid information, and triumph over those difficulties which others might deem insurmountable! That my views are not chimerical may be inferred from the success which, as far as my own powers are concerned, has hitherto attended my exertions."

In 1827 Lieutenant Holman commenced a voyage round the world, which he completed in 1832. The circumstances connected with such an enterprise were sufficiently arduous, but they did not present the same amount of difficulty as was involved in the land travels above-named. During this voyage he visited various parts of Africa, Asia, Australasia, and America, and the results of his investigations were published in four volumes, dedicated to Queen Adelaide; the first of which appeared in 1834. The connection that formerly existed between our traveller and the sea made long

voyages particularly agreeable to him; and we find that going aloft and even ascending to the mast-head were among his favourite occupations. He also not unfrequently proved himself far from a useless member of the ship's company, for it is stated that being on one occasion at Gravesend and sleeping on board-ship, in the middle of the night a collision occurred, which so shook the vessel that every one thought they were going to the bottom. Holman, however, rushed on deck in his night dress, and, hearing the captain call to some one to take the helm, he immediately seized it, and obeyed the captain's orders so well that they were soon rescued from their imminent danger. The captain being only just able to see a white dress, took the wearer for his wife and rushed to embrace her, exclaiming that she had saved the vessel. In view of this incident, it is not surprising to find that Holman was permitted to take the helm in ordinary weather whenever he pleased.

After the foregoing events, our traveller confined his journeyings to his native country, and made frequent excursions from Windsor to various parts of the kingdom. When in London he usually took up his temporary residence at a boarding-house (once the private dwelling of Edmund Burke) about the middle of Gerrard Street, Soho, then a far more respectable street than now; and persons familiar with West London, about twenty-five years ago, must often have noticed a blind gentleman, plainly dressed (the only remarkable article of apparel being a hat with a brim of more than ordinary breadth), walking briskly through the streets with a step light and buoyant, with his hand linked in the arm of a servant, whom he seemed to guide rather than to be led by. His figure was spare and his face intelligent, with a pleasant and kindly expression, not altogether free from traces of physical suffering, and it had acquired a special character, almost Oriental, from a long beard which had grown

nearly white. This gentleman was Lieutenant Holman, the blind traveller and author, and his presence never failed to create an impression not easily forgotten. It could have been wished that in his various works Holman had given more details with regard to himself personally, as such information would have been very useful to other blind persons, and it is also to be regretted that his volumes are merely ordinary books of travel, containing only such information as can be found in the productions of almost any writer on the same subjects. His style is discursive rather than graphic, and it must be admitted that the prevailing feature of his works is quantity rather than quality. Yet Lieutenant Holman overcame immense difficulties; and when we consider that he prepared for the press seven volumes of moderate bulk, it is evident that his labours as an author were scarcely less remarkable than his enterprise as a traveller. While on his journeys, if possible, he used to get persons to make memoranda for him, and when this could not be done, he made short notes himself by means of Wedgewood's noctograph; as, however, he could not read these notes after they were written, they were of small value to him, and he had, he says, to trust principally to his memory. It does not appear that, strictly speaking, Holman ever travelled without a guide; he was passed on from one conveyance to another, and whenever he stayed in a place for ever so short a time, he engaged the services of an attendant, who generally was also an interpreter. Holman always managed his own monetary affairs, and he used to draw bills on London, which were cashed by the merchants and bankers of the various towns through which he passed. He also carried with him about a hundred pounds in Herries and Farquier's circular notes, which were to be used in case of failure in getting his bills cashed. By this arrangement he was prevented from carrying a large amount of coin,

which greatly lessened his apprehension of being robbed. There is a passage in 'Othello' that Holman was fond of quoting, and which accurately embodies one of the golden rules of his own life. He never indulged in fruitless regrets, but with a cheerfulness and bravery of heart which imparted at once serenity and resolution to his character, he was always ready to make the best of the most untoward events. Here is the passage :—

> "When remedies are past the griefs are ended,
> By seeing the worst which late on hopes depended,
> To mourn a mischief that is past and gone
> Is the next way to draw new mischief on.
> What cannot be preserved, when fortune takes,
> Patience her injury a mockery makes.
> The robbed who smiles steals something from the thief,
> He robs himself who spends a bootless grief."
>
> *Othello, act i. sc.* 3.

Holman some time before his death was engaged in writing a book on foreign wines, and in preparing for the press a new edition of his travels, but these works were never published.

Lieutenant Holman died in 1857, at his lodgings in John Street, Trinity Square, London, and his remains were interred in Highgate Cemetery, where, about 150 yards beyond the chapel on the left of the carriage-drive, turning to the left from the principal entrance, will be found a simple stone, with the following inscription :—

"In memory of the celebrated blind traveller, Lieut. James Holman, R.N., F.R.S., etc., of Travers' College, Windsor, who died the 28th of July, 1857, aged 70."

Lawyers and Divines.

Nicaise de Werde, a Priest of the Roman Catholic Church.

According to the Roman Catholic canon law, and it is said of that also of the Anglican Church, no per-

son can be admitted into holy orders who labours under the infirmity of blindness; but, in this case as in many others, the spirit is better than the law, for we find that persons not possessed of sight have been regularly ordained priests of the Roman Catholic Church, and clergymen of the Church of England.

Nicaise de Werde, or Nicaise de Woerde, sometimes called Nicaise of Malines, and Nicasius de Wurde, was a native of Belgium, and flourished towards the end of the fifteenth century. He lost his sight at the age of three years, and having devoted himself to the study of law and divinity, he reached such excellence that he was made a professor of common and civil law in the University of Cologne. His reputation was so great that the degree of Doctor of Divinity was conferred upon him by the famous University of Louvain, and the Pope actually granted a dispensation suspending the law of the church in his case, in order that he might be ordained a priest, and thereby be duly qualified to offer the sacrifice of the mass, and perform the other rites of the Latin Church. All that is further recorded of De Werde is, that he devoted the later years of his life exclusively to pastoral duties, and that he died at Cologne in 1492. It cannot fail to be gratifying to the blind to know that a man, labouring under the same privation as themselves, reached such excellence that even the chief ruler of Christendom was moved to suspend the laws of the church in order that justice might be done to a blind professor, and that every obstacle might be taken out of the way of the development of his faculties, for the benefit of his fellow-men; and when it is considered what peculiar sanctity is claimed for the priesthood, and how requisite the possession of the sense of sight appears for the due performance of the elaborate and punctilious services of the Church of Rome, we are led to admire the liberality of the Pope of that day, and to wish that many of those who are

now so furious against the Romish system would at least imitate him in carrying out the Christian principle of being "eyes to the blind."

Dr. Nicholas Bacon.

This remarkable lawyer appears to have been born in London about the beginning of the sixteenth century. Some writers have given a positive date, but they have evidently confounded the subject of this notice with Sir Nicholas Bacon, the eminent minister of Queen Elizabeth. Dr. Nicholas Bacon was descended from the same ancestors as those of Lord Bacon, the great philosopher, and we have it on credible authority that he lost his sight at the age of nine years by an arrow from a cross-bow. His parents had intended him for the legal profession, and after his blindness, having heard of the achievements of Nicaise de Werde (a sketch of whose life has already been given), they determined that loss of sight should not interfere with the carrying out of their original design. Young Nicholas therefore pursued his studies just as though nothing had happened, the single exception being, that books were read to him instead of his reading them for himself. We are not told where and under whose instruction he acquired his elementary knowledge, but it is stated that the professors at the university (probably that of Brussels) admitted him into the classes rather from an idea of affording him amusement than from any expectation that he would profit by the lessons. He, however, proceeded so well that he always obtained places of distinction among his fellow-students; it was nevertheless thought that, although he had progressed rapidly in the preliminary steps of learning, his advancement would be certainly checked by the difficulties connected with the higher branches of academical knowledge, and when poetry became the ob-

ject of competition, it was a general opinion that his career would be stopped; but Bacon soon showed by his success in this study, the immense difference that exists between mental and physical blindness. After continuing his application to literature and science for the period usual with gentlemen of his age and position, he turned special attention to the study of jurisprudence, and in due time had the satisfaction of seeing himself elected Doctor of Laws by the University of Brussels. In consequence of the attainment of this degree, Bacon commenced to practise as an advocate in the Council of Brabant; and he had the great pleasure of finding that he terminated almost every suit in which he was engaged to the entire satisfaction of his clients. It is much to be regretted that more is not known of the history of this distinguished man; but it is gratifying to find that, when blindness entered the great Bacon family, the member of the house afflicted by it, so far from dishonouring his ancestors, added new laurels to the family wreath which he carried untarnished to the grave.

The Rev. John Troughton.

This eminent Puritan minister was born at Coventry in 1637, and became blind at the age of four years from smallpox. His father (Nathan Troughton, a respectable clothier) had the good sense to send his blind son to the free-school of his native town, where, under the instruction of Samuel Frankland, he acquired the rudiments of education, which enabled him when nineteen years old to enter as a scholar of St. John's College, Oxford, where he eventually became a Fellow, and took the degree of Bachelor of Arts.

On the restoration of Charles II., Troughton, like other nonconformists, was ejected from his Fellowship, whereupon he retired to the small town of Bicester, in Oxfordshire, and maintained himself by giving

academical instruction, and by preaching to his co-religionists whenever opportunity offered; the latter pursuit was attended with considerable risk, as to preach or pray otherwise than in the prescribed manner was then contrary to law, and subjected him who would serve God according to his conscience to the risk of divers pains and penalities. This hard state of things, however, was but of short duration, for, in 1671, the 'Declaration for Religious Toleration' was issued; and Troughton, wishing to turn the opportunity to the best account, repaired to the city of Oxford in company with three other Bachelors of Divinity, to re-establish public preaching there according to the Puritan system; and it is evident that the reputation of our blind minister must have stood high with the brethren, as he was specially selected by the elders for this important work. On arriving at Oxford, the four Puritan divines commenced their religious services at a private house in Thames Street, without the North Gate, where many of the university students attended from curiosity, and were loud in their praises of blind Troughton, as he was called, alleging that he excelled his three associates; and indeed his merits must have been of no ordinary kind, for Anthony Wood, a bitter enemy of the Puritans, says that he (Troughton) "was a good school divine and metaphysician, and was not of so busy, turbulent, and furious a spirit as those of his persuasion commonly are." "He was respected by, and maintained an amicable correspondence with, some of the conformable clergy, because of his great knowledge and moderation."

The works written by Troughton were 'Lutherus Redivivus,' or 'The Protestant Doctrine of Justification by Faith only," parts i. and ii.; 'Letter to a Friend touching God's Providence,' a postscript to the foregoing letter; 'Popery the Grand Apostasy,' and 'An Apology for the Nonconformists.' This pious and learned divine died at Oxford on the 20th of

August, 1681, at the age of 44, and his body was carried to Bicester and buried in the church. The funeral sermon being preached in the town by one of his co-religionists, who was also blind. This man, named Abraham James, had been educated at Magdalen Hall, Oxford, and was at the time of Troughton's death master of the Free School, at Woodstock; he was of an ardent temperament, and when preaching the sermon above named, was so carried away by his feelings that he attacked the Established Church in no measured terms, which so offended the vicar of the parish, who was present, that he complained to the Government, and James would certainly have been punished and lost his school, had he not apologized for his hasty expressions. The conduct of these two blind scholars and divines in boldly vindicating the cause which they considered to be true, at a time when such a course exposed them to all kinds of inconvenience, indignity, and peril, cannot but be regarded with respect, even by those who differ from their views; and their successful endeavours to provide for their own maintenance, and to eat no man's bread for nought, are worthy of universal imitation. "The prudent, cautious, self-control," evinced by Troughton at a time when the exhibition of such qualities was most difficult and rare, shows that he possessed the true Christian spirit, and his works prove him to have been a scholar of whom the Blind may justly be proud.

The Rev. Richard Lucas, D.D., Prebendary of Westminster, etc.

This distinguished clergyman of the Church of England was a native of Wales, being born at Presteign, in Radnorshire, in 1648. When sixteen years old he entered Jesus College, Oxford, where he was ordained, in 1672, soon after which he became

Master of the Free School at Abergavenny, and from thence was preferred to the Vicarage of St. Stephen's, Coleman Street, London, and to the Lectureship of St. Olave's, Southwark. His sight, which began to fail in his youth, entirely left him soon after his arrival in the metropolis; but this in no way interfered with his ecclesiastical duties, as he not only continued the pastoral care of the two churches above named, but also was installed, in 1691, as Prebendary of Westminster.

It is a striking testimony to the way in which the soul may triumph over bodily infirmities, to find that this eminent divine not only performed the triple duties here stated, but also wrote several works after his loss of sight; and it may be as well to mention that of the following publications which issued from his pen, the best and the greater number were produced during his blindness; the works are as follow:—

'Practical Christianity,' 'An Enquiry after Happiness,' Five volumes of Sermons, 'The Morality of the Gospel,' 'Christian Thoughts for every Day in the Week,' 'A Guide to Heaven,' 'The Duty of Servants,' and a Latin translation of 'The Whole Duty of Man.'

Dr. Lucas died in 1715, and was buried in Westminster Abbey, but no stone marks his resting-place. The opinion entertained of his writings, by the wise and good, may be gathered from the following extracts:—

Dr. Doddridge says, in his MS. papers as given by Orton,—"His style is very peculiar, sometimes exceedingly fine, nearly approaching to conversation; sometimes grand and sublime; generally very expressive. His method not clear, but his thoughts excellent; many are taken from attentive observation of life; he wrote, as entirely devoted to God, and superior to the world. His 'Practical Christianity' is most valuable, and also his 'Enquiry after Happiness,' especially the second volume." Hervey, the author of the 'Meditations,' also writes:—"May I be permitted

to recommend, as a treasure of inestimable value and a treatise particularly applicable to my subject, Dr. Lucas's 'Enquiry after Happiness;' that part, especially, which displays the method, and enumerates the advantages of improving life, or living much in a little time, chapter iii. page 158 of the sixth edition,—an author in whom the gentleman, the scholar, and the Christian are most happily united; a performance which, in point of solid argument, unaffected piety, and a vein of thought amazingly fertile, has perhaps no superior. Nor can I wish my reader a more refined pleasure, or a more substantial happiness, than that of having the sentiments of this entertaining and pathetic writer woven into the very texture of his heart."

Sir Richard Steele and the celebrated John Wesley also warmly recommend the works of our blind pastor.

The Rev. Edward Stokes, M.A.

We gather from a work, entitled 'Biographical Anecdotes,' as copied by Wilson, that "this benevolent clergyman was born in 1705. When nine years old, he and his elder brother were sent to school, but an accident occurred about this time which almost proved fatal to him. As his brother was amusing himself with a loaded pistol, it suddenly went off, and a portion of its contents lodged in Edward's face; in consequence of which misfortune he entirely lost his sight. As soon as his health was sufficiently established, he returned to school, where he pursued his studies with great success. From school he went to the university, where he remained till he took the degree of Master of Arts; he was then admitted into holy orders, and shortly afterwards was appointed to a living in Leicestershire as the parish minister. He was beloved by the people among whom he lived; his benevolence knew no difference between one sect and another, but his

bounty was equally experienced by all. Notwithstanding his blindness, he performed the service of the church for many years, with the assistance of a person to read the lessons. At his death, the poor of his parish had to lament a most liberal benefactor, who had expended among them nearly the whole of a very handsome private fortune. He died at the Rectory-house, at Blaby, in Leicestershire, June, 1796, in the ninety-third year of his age, and the fiftieth of his incumbency."

We believe the above is the only instance on record of any one being ordained, as a clergyman of the Church of England, after having become blind; and although such a practice is said to be contrary to canon law, yet the example of Mr. Stokes shows that admission to the ministry of the Anglican Church of a gentleman who has lost his sight is not impossible.

Sir John Fielding, Knight, Chief Magistrate of Bow Street Police Court, and a Justice of the Peace for the Counties of Middlesex, Essex, Herts, Kent, Surrey, and for the City and Liberty of Westminster.

The eminent lawyer and philanthropist whose name heads this article was the son of General Fielding, and the half-brother of Henry Fielding, the novelist. Although blind from childhood, his parents had him trained for the legal profession, and an amount of success attended their enlightened efforts which will prove a never-failing encouragement to the friends of the blind throughout future generations.

On obtaining the necessary qualifications Fielding became a member of the Home Circuit, and was the life and soul of the convivial meetings of the brethren of the law; and his reputation reached so high a pitch for more solid acquirements, that on the failure of the health of his half-brother, Henry Fielding, he was appointed to succeed him as magistrate at Bow Street

Police Court. This position was, at that time, surrounded by peculiar difficulties, from which the well-paid and efficiently served administrators of the law are now happily exempt. The chief of these evils arose from the remuneration of the magistrates being derived largely from bribes, administered both by prosecutors and defendants, which laid the action of the courts of justice open to grave suspicion.

This state of things Sir John Fielding determined should cease, and he followed out his resolution with such pertinacity that a bribe soon became a thing which belonged exclusively to past history. In 1761, soon after stipendiary magistrates were appointed for large towns, our blind lawyer was created chief magistrate of the kingdom, and received the honour of knighthood, which distinction has been conferred on each succeeding chief magistrate willing to accept the title. Fielding's acuteness on the magisterial bench may have been equalled, but has never been surpassed. When any one was brought before him, after asking the officer a question or two, the whole history of the prisoner rushed to his mind, all the culprit's aliases, his various larcenies, robberies, cheatings, and tricks came to the aid of the sightless dispenser of justice to show him the proper way to deal with the case; and whenever a crime of more than ordinary atrocity was committed in the metropolis, or the surrounding counties, "blind Fielding the Thief-catcher," as he was called, was consulted by his brother justices, and his sagacity was seldom at fault. But deeds of mercy were more congenial to Sir John's nature than acts of suppression. In the former his soul delighted, but it was necessity alone that caused him to exercise the latter. He was an active and benevolent promoter of the Marine Society and the Magdalen Hospital, and he himself founded, in 1758, the Female Orphan Asylum, Westminster Road, Lambeth, which has now about a hundred inmates, and a capital of £50,000. If

we are not mistaken this orphan asylum was the first establishment of the kind in the kingdom, and it is certain that it was the first in the metropolis.

Fielding's conversational powers were of a very high order, and he excelled particularly in anecdote. A writer in 'Fraser's Magazine' says,—"As a companion Fielding was invariably pleasant and inimitably entertaining. His conversation abounded with anecdotes, of which he had an inexhaustible fund: his great stock was of Irish stories, which he gave with great truth and humour. I have repeatedly heard him say that the lowest class of the Irish had more native humour than any other body of people in the same rank in life. He would then relate, in proof of it, the event of a bet which was made on the subject at one of the club-houses in St. James's Street, which then was crowded with English and Irish chairmen, and which was to be decided by the reply of one of each country to the same question. It was, 'If you were put naked on the top of St. Paul's, what would you be like?' The English chairman was first called in, and the question being put to him, he ran sulky, and refused to give any direct answer, saying they were making fun of him. Pat was then introduced, and the question being propounded to him: 'What should I be like?' says he; 'Why like to get could, to be sure, your honours.'—'This,' says he, 'they call mother-wit; and the most illiterate have a quickness in parrying the effect of a question by an evasive answer.' I recollect hearing Sir John Fielding giving an instance of this, in the case of an Irish fellow who was brought before him when sitting as a magistrate at Bow Street. He was desired to give some account of himself, and where he came from. Wishing to pass for an Englishman, he said he came from Chester. This he pronounced with a very rich brogue, which caught the ears of Sir John. 'Why, were you ever in Chester?' says he. 'To be sure I was,' said

Pat; 'wasn't I born there?'—'How dare you,' said Sir John Fielding, 'with that brogue pretend to have been born in Chester.'—'I didn't say I was born there,' says he; 'I only asked your honour whether I was or not.'"

Fielding, like other intelligent blind persons, could tell, with tolerable accuracy, the length, breadth, and height of any room he might enter, and could recognize immediately by the voice any one whom he had once known. In his carriage he had a speaking-pipe communicating with the coachman, and when an obstruction occurred in the streets, he would ascertain from the coachman the nature of the impediment, and would call out of the carriage window in an authoritative voice to the driver of any particular vehicle to move on, which caused no little surprise to the by-standers, and was the occasion of some enjoyment to the author of the joke.

Sir John undertook the care of the children of his half-brother, Henry Fielding, the novelist, when he left England for Portugal in broken health, and he watched over them with true parental care after the premature death of their father.

The literary productions of this distinguished man were:—

'A Plan for Preventing Robberies within Twenty Miles of London, with Advice to Pawnbrokers,' 'An Account of the Origin and Effects of a Police, set on foot by his Grace the Duke of Newcastle, in the year 1753, upon a plan presented to his Grace by the late Henry Fielding, Esq. To which is added, a Plan for preserving those deserted Girls in this Town, who become Prostitutes from Necessity, 1768.' This was a small tract, 8vo. 'Extracts from such of the Penal Laws as particularly relate to the Peace and good Order of the Metropolis,' 1761, 8vo, a larger publication; 'The Universal Mentor, containing Essays on the most important subjects in life, composed of Ob-

servations, Sentiments, and examples of Virtue, selected from the approved Ethic Writers, Biographers, and Historians, both Ancient and Modern,' 1762, 12mo. 'A Charge to the Grand Jury of Westminster,' 1735, 4to, stated to have been published at the unanimous request of the magistrates and jury when Fielding was chairman of Quarter Sessions. 'Another Charge to the Grand Jury on a Similar Occasion,' 1766, 4to. 'A Brief Description of the Cities of London and Westminster, etc. To which are added some Cautions against the Tricks of Sharpers,' etc., 1777, 12mo.

Sir John Fielding died in the year 1780, regretted by all who knew him, and the blind should never forget that the first chief magistrate of England was without sight from early youth, that he was knighted for his abilities, that he was a scholar and a Christian philanthropist, and that in magisterial success he has never been surpassed.

Mr. William Pickard, Solicitor.

The subject of this notice about the year 1808 lost his sight by a gun accident; at the time of the occurrence of the melancholy event, he was under articles as a clerk to a solicitor, and it says much for the courage of the sufferer, and for the kind consideration of the gentleman with whom he was placed, to find that after his blindness he continued to serve out his articles, and that he was duly admitted as an attorney at the Court of Queen's Bench, before Mr. Justice Bayley. Mr. Pickard subsequently commenced to practise as a solicitor at Wakefield; and although he began his career with very slender means, yet such were his business talents that he overcame all the difficulties connected with his position, and succeeded in acquiring a fortune of about £12,000. He was never married, but had two sisters, one of whom was

particularly useful in reading to him books and documents connected with his practice. Mr. Pickard fulfilled every branch of his position with zeal and assiduity, and he even had clerks articled to him, one of whom, we believe, was Mr. James Witham, who became town clerk of Wakefield. This blind solicitor died about the year 1836, regretted by a large circle of friends, and leaving an example which ought not soon to be forgotten.

Mr. Henry Brown, a Law Student.

The following account appeared in the 'Wakefield Journal and Examiner' for March 16th, 1866, which we give *in extenso*.

The writer says,—"On Monday last the grave closed over all that it could detain of Henry Brown, jun., who died at the early age of eighteen, after a short but severe illness. I had the benefit and privilege (for it was no less) of his intimate acquaintance, and indeed I may say close friendship; and my knowledge of him induces me to offer you this brief and imperfect memoir of him, whose loss is greater, not only in his own circle, but to his native town and to the country at large, than can be readily understood by that large majority who remember only the pale, calm countenance, and slight form of the blind youth who had grown up amongst them, but was too modest and retiring to claim any attention. He was born at Wakefield on the 5th of January, 1848, and gave early promise of great intellectual superiority, and at the same time of considerable delicacy of constitution, and lost his sight before the completion of his third year from ophthalmia arising from dentition. At that early age he read well, and could put dissected maps of any country together quickly and correctly. I pass over the next two years of distress and suffering, borne with wonderful patience and cheerfulness by the

little fellow, and of unavailing efforts to procure relief by the late Mr. Neill, of Liverpool. At five years of age his health was sufficiently re-established to warrant an attempt being made to begin his education over again, and supply to his mind the information for which it thirsted. Notwithstanding the terrible disadvantage under which he laboured, he mastered the rudiments of general education with astonishing rapidity.

"Music also claimed a share in his curriculum, and as soon as the drudgery was past, his progress in this was as rapid as in all other branches. At nine years of age he passed three months in Liverpool, to attend the Blind Institute there, for instruction in certain manual occupations, not attainable at home. With this exception, his education was solely conducted at home. So retentive was his memory, and so wonderful his power of realizing descriptions and assimilating facts, that in a short space of time he became a proficient in Euclid and mathematics, including geometry and conic sections, algebra and the higher branches. In classics and modern languages, his progress was on a par with his other studies, so much so that after one year and a half's study of German, he selected that difficult language for the Civil Service examination, which he passed with credit before the completion of his seventeenth year.

"On the pianoforte, and more especially on the violin, his performance was far superior to most amateurs; he took on several occasions a leading part in oratorios and other concerted pieces, and rendered the works of many of the greatest masters with execution, taste, and feeling. His acquaintance was so extensive and accurate with chemistry and electricity, that he could lecture and conduct experiments requiring the most careful and skilful manipulation. In mechanics he was equally well versed, also in natural history, including physiology, comparative anatomy, and mineralogy. In his

seventeenth year he was permitted by the Master of the Rolls to enter articles as a solicitor, and at the time of his premature death, had acquired a large amount of legal knowledge. His judgment was clear and sound, and his arguments logical. Nor whilst the intellectual was thus matured, were the moral and religious elements one whit behind. He was a calm, hopeful Christian, an excellent son, dutiful, obedient, and affectionate. Like all truly great minds, he had a modest and humble opinion of himself, was a tender and true friend, and I can say with truth, that in a constant intercourse of sixteen years, I never heard from his lips one fretful complaint at his own affliction, one harsh word about another, or one expression betokening even a consciousness of his own vast acquirements. Strange to add, he entered with zest into manly sports and pastimes. With the assistance of a groom, he hunted, and could give a vivid description of a run; he was a devoted and skilful angler; enjoyed any public spectacle, depending on description; and entered into amusements with glee and spirit. I was indebted to his clear explanations for much of the pleasure I derived from the late exhibition, especially in the scientific departments, as improvements in telegraphy, etc. His loss has left a void in many hearts, which Time, the great healer, will fail to fill. I, who pen these lines, loved him living, and love his memory now. I do not expect to look upon his like again, but I would not, if I could, recall to earth one to whom, I believe, 'to die is to gain.'"

Music and Musicians.

"Such music
Before was never made
But when of old the sons of morning sang."

Milton.

That those suffering from blindness should have

found music to be at once the greatest solace in their misfortune, and the most accessible means of obtaining a livelihood in the more respectable walks of life, can scarcely be matter of surprise. We are told, indeed, that "Music hath charms to sooth the savage breast," and this being so, it is no marvel that it hath charms to sooth the sorrows of the sightless.

As health and happiness cannot be maintained without the mind being brought into contact with an ever-recurring variety of impressions, and as the sense of sight is the medium through which the greatest amount of change is obtained, it is of the highest importance that persons deprived of this sense should become connected with those pursuits which afford the greatest compensation for their loss, and surely of all occupations none possess in this respect greater claims on our attention than music.

It will be seen in the article on begging how largely music is employed by seekers of alms; but the use of this noble art is not by any means confined to that much to be pitied class of persons who are obliged to solicit their daily bread from door to door. From the earliest times music has been practised by the blind of all ranks in life, and has been universally esteemed as the most precious consolation in their affliction. How sweetly Homer sang, we have already seen, and our notice has also been directed to the way in which Milton, Blacklock, and others relieved their studies by having recourse to music's revivifying strains.

We shall now therefore direct particular attention to the capabilities of this art in procuring for the blind a respectable means of livelihood. Before however, proceeding to our task, it is believed that the insertion of the following lines indicative of the attachment often felt by the blind for their musical instruments, will not be out of place here :—

The Blind Girl to her Harp, by Charles Jeffreys.

"Harp! my own beloved Harp! My fingers o'er thee stray,
And wake the sounds that bear my thoughts to brightest realms away.
In sorrow unto thee I turn, so touching is thy tone,
That list'ning to thy fitful woes makes me forget my own.

"I cannot see thee, but thy touch thrills through my ev'ry vein;
And feelings half forgotten, start back to life again!
I sing of skies both blue and bright, of flow'rs of varied hues,
Of sunny smiles, of beaming eyes, and diamond glist'ning dews:

"All meaningless would be my song, and were it not for thee;
But thou dost well interpret all their thousand charms to me.
My heart from sorrow passes to Glory's proudest theme,
And in thy martial music ten thousand warriors gleam.

"I hear their falchions clashing, I see their banners wave,
I join their shout of victory, and triumph with the brave.
But then a low dull moaning, falls from thy tuneful strings,
And sympathy awaketh her sad imaginings:

"I hear the vanquish'd flying, I see the wounded dying,
And pity learns to mourn, too late, the orphan's and the widow's fate.
Harp! my harp, Oh! never more awake thy stirring thunder;
Nor nerve the warrior's arm to tear our dearest ties asunder:

"But be it thine with gentlest tone o'er sorrow's bosom stealing,
To wake the ruthless heart to love, and kindle human feeling.
My Harp! my Harp! my own beloved Harp!
My Harp! my Harp! my own, my own beloved Harp."

Dr. Kitto remarks that, "Among the mural tablets of the ancient Egyptians there is one copied by Rosellini and Sir J. G. Wilkinson, which is among the very few exhibiting anything of character or sentiment, or is able to inspire any emotion. It is from the tombs at Alabastron, and represents a blind harper sitting cross-legged on the ground, attended by seven other blind men, similarly seated, who sing and beat time with their hands. They are evidently professional musicians." From this we learn that music was at a very early date a source of employment in Egypt for the blind, who in that country have always been frightfully numerous. That it was no less a source of enjoyment is indicated by the countenances of the men

which are lighted up with animation and intense interest, while the artist has contrived that not only the eyes, but every feature of the men's faces and the position of their heads should give unmistakable evidence of blindness.

Members of the musical profession are naturally divided into two classes, viz. compos ers and performers, and we fear it must be admi tted that blind professors have far more frequently excelled in the latter than in the former departm ent. Why this should be the case it is very hard to say, especially as the art of composition seems to depend entirely on the genius of the composer, and does not appear to require in any degree the possession of sight. No doubt the difficulty found by th e blind in transferring their conceptions to paper h as something to do with the matter, but it does not by any means account for the paucity of really great productions by the blind.

From what has been said, it is not wished to convey the impression that no good compositions have emanated from persons without sight, but simply to express regret that no blind musician has succeeded in procuring a lasting reputation as a composer, and surely we may indulge the hope that the day may come when the name of such an one may be found side by side with those of Handel, Mendelssohn, Weber, Mozart, Bach, Haydn, Purcell, etc. We know that for the last few years of his life Handel was without sight, but this has nothing to do with the question before us, as his great works were all written when he could see, and he is therefore not entitled in any way to be considered a blind composer.

Of the musical writers without sight, Dr. Stanley holds the chief place, and his biography will be found among the lives of other musicians, which we shall now proceed to lay before the reader.

Franciscus Salinas, Professor of Music at the University of Salamanca.

Franciscus Salinas, one of the most eminent musicians of the sixteenth century, was a native of Spain, being born at Salamanca in 1513. It is said that he was blind from birth, and began the study of music when quite a child. Nearly all his time during youth was spent in singing and playing on the organ, and when still a lad he acquired a knowledge of Latin from a young lady who, being about to take the veil, obtained from Salinas a knowledge of the organ in return for instruction in languages. In due time young Franciscus was placed at the University of Salamanca, where he devoted himself with success to the mastery of Greek, philosophy, and the arts. Want of means, however, caused his premature removal, after which he was fortunate in obtaining the patronage of Petrus Sarmentus, Archbishop of Campostella, by whose influence the blind musician was lodged in the king's palace, and when the archbishop was made cardinal, Salinas accompanied him to Rome and devoted himself for thirty years to the study of the works of Boethius and the writings of the ancient Greek harmonicians. He subsequently returned to Spain with the intention, it would seem, of ending his days in his native land; but at the end of three years he was recalled to Italy, where he remained till an offer of the professorship of music at his own University of Salamanca, with a liberal salary, induced him to return to Spain. Such celebrity was acquired by this blind musician during his life that Pope Paul the Fourth created him Abbot of San Piaciato della Rocca Salegna.

Salinas died in February, 1590, at the age of seventy-seven years, leaving behind him a considerable reputation as a musical performer, various compositions for the organ and other instruments, and a great work

entitled 'De Musica,' which was for a long time the chief authority in every country of Europe on all musical questions. This book contains a minute analysis of all the ancient Greek writers on music, and among other things describes an instrument invented by Salinas for demonstrating the ratios of the consonances and of the lesser intervals. Dr. Pepusch affirms that it is to Salinas we are indebted for the rediscovery of the true enharmonic, which for many ages was considered lost. Our blind author in his great work also treats of the temperaments of the organ and other instruments, and makes many valuable remarks on the nature and capabilities of the human voice.

It may be observed that one of the characteristics of the writings of this composer is the evidence they afford that he took nothing for granted, but adopted only those principles which he had actually proved. It is this quality that pre-eminently distinguishes Salinas from his contemporaries, and gives a value to his works which the lapse of three centuries has not altogether effaced.

Caspar Crumbhorn, Director of the Musical College at Lignitz.

This talented German was born in Silesia, about the latter half of the sixteenth century, and lost his sight when about three years old. Although every department of musical science was at that time making rapid progress, Crumbhorn's compositions obtained great applause; and he eventually acquired a considerable reputation as a performer on the organ, the violin, and the flute,—excellence in which three instruments has been seldom possessed by one man. The abilities of Crumbhorn obtained for him the patronage of Augustus, Elector of Saxony. But preferring his native province as a home, he returned to Silesia and was appointed organist of the Church of St. Peter and St.

Paul, at Lignitz, where he also became the chief director of the Musical College, both of which offices he held until his death, June 11, 1621, and it may at least be affirmed that Crumbhorn left a name as a musician of no ordinary stamp.

Carolan, the Irish Composer and Harpist.

Turlaugh, or Turlough O'Carolan, the greatest and nearly the last of the Irish bards, was born in 1670, at Nobber, Westmeath, and became blind from smallpox at so early an age that colour left no lasting impression on his mind. His father was one of those very small farmers who abound in the Emerald Isle, and he could do so little for his children that Turlough was quite unacquainted with the English language till very late in life. At the age of twelve years he received some lessons on the harp, but scorning the rules and the plodding of regular performers, he dashed off at once into the most brilliant and enchanting melodies. It seems, indeed, that Carolan was a born musician and poet, for he was ready at any instant to celebrate any person or thing in verse, and to compose thereto a suitable melody with an instrumental accompaniment. His first effusion seems to have been in honour of a young woman named Bridget Cruise, for whom he entertained an ardent, though unrequited affection; while speaking of this attachment, it may be as well to refer to an incident that occurred many years after, showing, as it does, the sensibility of Carolan's powers of touch. Having gone on pilgrimage to St. Patrick's Purgatory (a cave in the Island of Loughderg, Donegal), on returning to the shore he met several persons about to make the same journey. One of these took hold of Carolan's hand, which caused him to start and exclaim,—"This is the hand of Bridget Cruise." Carolan's sense of feeling had not deceived him; it was, indeed, the hand of her he had once loved so pas-

sionately, which he at once recognized, although he had not felt it for more than twenty years.

Soon after arriving at man's estate the subject of this sketch was united in wedlock to Mary Maguire, of the county of Fermanagh, who is represeuted by some writers as having been proud and extravagant; but, however this may be, her husband has left a poem in her honour of the most eulogistic character, which still holds a place among Irish ballads. Soon after his marriage the bard found means to obtain a small farm, near Moss Hill, in the county of Leitrim, where he built a house, and for a short time lived more merrily than wisely, which obliged him to give up farming and trust to his musical powers for a subsistence. His subsequent mode of life partakes of the romantic and the grotesque, but withal he found it lucrative and enjoyable. His habit was to travel through the country riding on a good horse, attended by an equally well mounted servant, carrying a harp; and Carolan's fame as a bard reached such a height that his visits were hailed by the noble and wealthy as those of a guest, and the honour of entertaining him was often contended for by influential county families. Wherever he stayed he never failed to produce a composition laudatory of his host, or of some fair member of the household. The number of his musical productions is said to have reached four hundred, and although this has been questioned, yet we see no reason to doubt the fact, as a harper was found some time ago in Dublin, who himself could play one hundred of Carolan's pieces, and who said that a great many compositions were in existence which he had heard, but could not play. Besides ballads on love and war, our musician devoted himself with success to religious productions, in composing which he entertained a belief that he was divinely inspired. He generally composed poetry to suit his music, but as all his writings are in the Irish language,

they have suffered much from translation. Some idea of his capacity for extemporaneous composition is afforded by an anecdote which states that being a guest at a house where an Italian musician was also being entertained, Carolan expressed his annoyance at the marked preference shown to the sighted foreigner; the master of the house, probably vexed by this reflection on his humanity and patriotism, replied that "when Carolan could play as well as the Italian he should be treated with equal honour;" the blind bard no way loth for the contest rejoined that "the Italian might play what piece he liked, and that he would undertake to play the same piece after him, and that he, Carolan, would then play a piece which the foreigner should be also required to perform." The trial of skill at once took place with a unanimous decision in Carolan's favour. How correct our bard was in arranging his compositions in accordance with the rules of musical science the following circumstance will show:—An Italian gentleman, resident in Dublin, hearing of the fame of the great harpist, and thinking that he was only some strolling player whose blindness made remarkable; with a view to test his powers sent to a friend in the country a mutilated copy of a musical production of great merit, with the request that he would ask Carolan to point out and supply the defects, and correct whatever he considered to be errors. Carolan after hearing it played through once said, "It is an excellent piece of music, but here and there it limps and stumbles;" he then made the required corrections and returned the copy to Dublin, which so astonished the Italian that he at once declared Carolan to be a thorough scientific musician.

The wonderful power exerted over the feelings by some of the productions of our blind composer, is shown by the following anecdote:—

O'Keefe, the comedian, when bringing out in London the drama of *Peeping Tom*, suggested to Dr. Arnold, who had charge of the musical arrangements,

that he should introduce a favourite air of Carolan's. The Doctor asked the name of the air, when he said that it was the "Irish Lamentation." "And who is to sing it? and what are your words?" replied the Doctor. O'Keefe rejoined, "Peeping Tom, and these are my words,—

> "Merry are the bells, and merry do they ring;
> Merry was myself, and merry could I sing;
> Merry is your ding-dong, happy, gay, and free,
> With a merry sing-song, merry let us be."

"And this is your 'Irish Lamentation,'" said the Doctor, laughing heartily.

O'Keefe again sang the same air, but this time very slowly and with great pathos, which so affected Dr. Arnold that it brought tears into his eyes; and O'Keefe, in stating this narrative, adds that "it really is one of the most plaintive, sweet, and heartrending strains ever composed."

That the itinerant bard, who was welcome alike at every castle and cabin of old Ireland, should have acquired a fondness for whisky can scarcely be matter of surprise; and although it is mentioned with censure that when injury to his health from intemperance compelled him to abstain from his favourite habit, he was frail enough to take to it again,—yet for one in his circumstances to have been able to refrain at all, so as to reach the advanced age he acquired, shows a moral principle of more than ordinary strength; and when we consider the extent of the demands made on his nervous system by the astonishing number and variety of his musical and poetical compositions, we are not astonished that he found it impossible to compose without stimulants; and as in the case of Carolan there was no bread without music, and no music without whisky, it must be admitted that his temptations were strong indeed.

Carolan died in 1738 in his 68th year, his wife

having preceded him by five years. A short time before death he called for his harp and played his well-known "Farewell to Music." During his last illness he was an inmate of the house of Mrs. M'Dermot, of Alderford, in the county of Roscommon. He was buried at the parish church of Kilronan, Ardagh, and his admirers long pointed out the green sward that covered him. It is said that when, for some cause, the bodies in the graveyard were disturbed, the country people selected a skull, which they supposed to be Carolan's, to which they tied a piece of ribbon to distinguish it from the others that lay strewn about the ground, but it is to be hoped, for the credit of religion and humanity, that this story is untrue.

We cannot, however, refrain from expressing surprise that a people so much attached to their country and to their national music as the Irish, should allow the resting-place of their greatest bard to remain unmarked by a single stone. In connection with this life it may be observed that, struck with the marvellous ability exhibited in the works of Carolan, some natives of Ireland, resident abroad, raised funds and forwarded them to Belfast, for the purpose of establishing an 'Institution for the Instruction of the Blind in Irish National Music;' the undertaking was commenced fifty or more years ago, and was entitled 'The Harp Society,' it has however ceased to exist, for more than forty years.

John Stanley, Doctor of Music, Master of the Royal Band and Organist at the same time both to the Society of the Temple and of the Church of St. Andrew's, Holborn.

The eminent musician whose life is now under review was born in London in 1713, and lost his sight at the age of two years from falling on a marble hearth with a china basin in his hand. His father, who was evidently in good circumstances, thinking

to afford amusement to his blind child, placed him when only seven years old to be taught music, under the care of Mr. Reading, then organist of Hackney Church. The progress of the boy was, however, so remarkable that it was determined he should adopt music as a profession, and accordingly he was placed with Dr. Green, to receive higher instruction. At the age of only eleven, young Stanley obtained the appointment of organist of All Hallows, Bread Street, in the register of which church it will be remembered is an entry of the baptism of the great Milton, and our musician two years subsequently was elected organist of the church of St. Andrew's, Holborn, in preference to a great number of competitors. While speaking of this church we are reminded of a connection that it possesses with regard to a poor blind strolling player, which it is thought well to insert here, as it throws some light on the state of the blind in the reign of Charles the Second, and is moreover not without some general antiquarian interest. During the prevalence of the great plague of London, a poor blind piper, being weary with his day's exertions in pursuit of alms, sat down at the close of evening on the steps of St. Andrew's Church, fatigue and gloomy reflections soon threw him into a deep sleep, and on the men with the dead-cart passing along Holborn to collect the bodies of those who had fallen victims to the fearful pestilence, they espied a human form on the church steps, and forthwith concluding that it was a wayfarer suddenly struck down, they seized the minstrel and placed him in the cart. The motion of the vehicle, however, soon awoke the piper, who, finding himself in such a strange position, and failing to make his voice heard, seized the pipes and began to make such music as he thought might bring him relief; the drivers, horrified on hearing such sounds from among the dead bodies, fled with dismay, swearing that Satan himself was in the cart. Of course this soon brought the poor blind

man assistance, and his life was thus saved. But to return to Stanley. When twenty-one years old the benchers of the Honourable Society of the Inner Temple chose him as one of their organists; and it is remarkable to find that he continued organist both of the Temple Church and of that of St. Andrew's, Holborn, until his death; so that he held both appointments for upwards of fifty years. Stanley, however, did not confine his attention to sacred music, like Caspar Crumbhorn, he was not only a good organist, but could also play well on the flute and violin; and some idea of his skill on the last-named instrument may be gathered from the statement that he included in his *répertoire* all Corelli's and twelve of Geminiani's solos. He was the conductor and soul of the concerts at the 'Swan and Castle,' in the City, and when that house was destroyed by fire, he lost two violins of great value. After the death of Handel in 1759, Stanley superintended the performance of the oratorios at Covent Garden Theatre, in which he was at first assisted by Mr. Smith, and subsequently by Mr. Lindley. This arduous undertaking he continued for upwards of ten years, resigning it only within two years of his death, when increasing age admonished him that his career in this world was drawing to a close. His abilities as an organist were so great that it was no uncommon thing to see at the Temple and at St. Andrew's thirty or forty organists waiting at the close of the service to hear the voluntary, and of this number Handel often was one. Stanley's skill as a musician was such that, when at a performance of one of Handel's 'Te Deums,' on finding the organ a semitone higher than the other instruments, he without any premeditation transposed the whole piece from D into the key of seven sharps major; and it is doubtful whether there was at that time another performer in the kingdom who would have attempted such a task, even though he had previously written out the whole of the piece.

Stanley's principal compositions were:—the oratorios of 'Jephtha' and 'Zimri,' and the latter of these was performed at Covent Garden during the first season of the author's management. He likewise composed the music to an ode performed at Drury Lane, in the year 1760, which was intended both as an elegy on the death of George the Second and a compliment to his successor. He also set to music a dramatic pastoral, entitled 'Arcadia, or the Shepherd's Wedding,' which was performed at the same theatre the ensuing year, immediately after the marriage of George the Third and Queen Charlotte.

Stanley died the 16th of May, 1786, at the ripe age of seventy-three, and was buried in the evening of the 27th of the same month, in the new burial ground of St. Andrew's, which it is believed is in Gray's Inn Lane. On the day of his funeral a tribute to his memory was paid at St. Andrew's Church by the performance of a solemn dirge and after service, 'I know that my Redeemer liveth.' Stanley had the satisfaction of receiving the degree of 'Doctor of Music,' and for many years he was Master of the King's band, in which office on his death, he was succeeded by Sir William Parsons.

Stanley is pre-eminently the model for imitation by blind musicians. He was a great instrumental performer, a very creditable composer, and above all, he conducted an orchestra so as to win the respect and admiration of the sighted performers who trusted to his direction, and of the public who, being charmed with the musical effects produced, were not careful to inquire whether the company to whom they owed the pleasure was directed by a sighted or by a blind man.

Dr. Alcock, the pupil of our blind musician, makes a great wonderment about his master being able to play at cards, and to direct a person about town, etc. But these things are common to the blind of average ability and education, and therefore do not merit

special notice. In addition to the compositions above named, Dr. Stanley wrote many psalm tunes, among which are included those of Matthias, Montgomery, Shirland, and Warwick. But the composition which will make his name live for ever in church music, is the psalm tune known by the name of 'Calvary,' and which is sung to the well-known hymn for Good Friday, commencing:—

"Hark the voice of love and mercy,
Sounds aloud from Calvary."

If Stanley had done nothing but composed this tune, he would not have lived in vain, for it has been, and still will be, the means of opening the hearts of thousands to receive with thankfulness the message of divine love.

Theresa von Paradis.

This talented lady, who had the honour of being presented to a greater number of monarchs than any blind person who ever lived, was a native of Vienna, the capital of Austria, where she lost her sight at the age of two years and eight months. The account given of this event is somewhat remarkable; it is said that in the middle of the night a cry being raised in the house, of Murder! Thieves! and Fire—her father rushed from the bedroom, calling for his sword and firearms, and that on his return he found little Theresa so overcome with fright that she was totally blind. Her parents being anxious for the child's amusement, had her taught at the age of seven years to sing, and to play upon the pianoforte, and in three or four years she was enabled to accompany herself in Pergolesi's 'Stabat Mater,' of which composition she sang a part at St. Augustin's Church, before the Empress Queen, Maria Theresa, who was so well pleased with the performance that she settled a pension for life upon the young blind vocalist. This introduction to

imperial favour was no doubt brought about by the influence of her father, who held a position of considerable importance, being an Aulic Councillor of the German empire. After studying music under several masters at Vienna, Mademoiselle Paradis was placed under the care of Herr Hozeluch, who composed several concertos expressly for her use, which she performed with great neatness and expression. When about eighteen years old she was placed under the care of the celebrated Dr. Mesmer, the founder of the art which bears his name. This assumed discoverer of animal magnetism was at that time creating great excitement at Vienna by his reputed medical cures, which induced the friends of Mademoiselle Paradis to apply to him for the recovery of her sight. The accomplishment of this he readily undertook, and that he might pay greater attention to the case she was admitted into his house as a boarder. It being found, however, after some time, that the Doctor under various pretexts objected to any one seeing the patient, the friends became alarmed and demanded her restitution; nor were their fears quieted by Mesmer's statement that he had recovered her sight, but that she must keep in retirement for a time, that the cure might be rendered permanent. They therefore procured the assistance of the magistrates, who took her out of his hands by force, when it was found that she had no more sight than when she became his patient. It is however, stated on the authority of an article in the 'European Magazine' that Mesmer had the malignity to assert that she could see very well, and that she pretended to be blind in order that she might not lose the pension granted by the Empress; and it is added that after the death of her patroness this cruel invention was professed to be believed by the Austrian government, to afford a pretext for the withdrawal of the annuity; but this assertion requires greater confirmation than it has yet obtained. That Mesmer should persist

in his statement can readily be imagined, as it agrees with what is generally recorded of his life, but that the Austrian government should make itself a party to such proceedings cannot be thought possible, especially as the object to be gained was simply to deprive a young musician of a pension of a few hundred francs. In 1780, Mademoiselle Paradis left Vienna, accompanied by her affectionate mother, and paid professional visits to most of the courts and large towns of Germany, after which she went to Paris, where her performances attracted great attention.

When she had been at Paris a few months she came to England, where, being furnished with letters of introduction to her Majesty Queen Charlotte, to the German Imperial Ambassador, and to the leading German musicians settled in London, she was well received, and had the honour of performing at Windsor Castle before George III. and his royal consort, and of playing at a grand musical entertainment given by the Prince of Wales at Carlton House; she also gave a public performance for her own benefit, which was extensively patronized. In all these efforts this accomplished lady acquitted herself in such a way as to obtain the most unbounded applause from her royal and distinguished auditors.

After staying in England a short time, Mademoiselle Paradis returned to France, and took part in the musical performances given at Paris in 1784, where she played on the pianoforte and organ with so much skill that for some time she was the leading attraction of the fashionable circles of that brilliant capital. It was about this time that she made the acquaintance of Valentine Haüy, the introducer of 'tangible print,' and the originator of schools for the blind; and it is evident that her example and suggestions had great influence in furthering his benevolent designs. Before ending this brief sketch it may be added that Mademoiselle Paradis possessed a method of emboss-

ing her own musical compositions by means of a system of figured bass, but the precise nature of the mode adopted is unknown. It is much to be regretted that fuller details cannot be obtained of this lady's life, as her great musical and other abilities, coupled with rare opportunities of obtaining the highest patronage, would doubtless furnish materials for a biography of far greater interest and utility than that which is now presented to the reader.

At the commencement of the nineteenth century several eminent blind musicians held situations as organists in London, amongst whom were conspicuous Grenville, Scott, Lockhart, Purkis, Mather, Stiles, and Warne. Grenville was organist of the Foundling Hospital; Scott at another period occupied the same position, and has left as specimens of his compositions the psalm tunes, Maidstone and Foundling. Lockhart has bequeathed to posterity the tunes, Lambeth and Carlile. Purkis was remarkable as a performer on the apollonicon. Mather was for many years organist of St. Bride's, Fleet Street, with a salary of £70 or £75 per annum. He was also musical instructor at the Institution for the Blind, St. John's Wood. His playing was very much admired, and he was often engaged to give organ performances in churches, and to open new organs in London, and in the most distant parts of the country. He was a musician from infancy, having being appointed organist at the parish church of Walthamstow when only eleven years old. At one period of his life he was much known as a pianist, and his abilities as a vocalist and tuner of pianos were of no mean order. His pupils were very numerous, and it is much to be regretted that he did not place on record the results of his experience, as from what the author knows of his wide range of knowledge, and truthfulness of character, he is confident that the history of his life would have been of essential service to the blind.

Mr. Mather was a great extemporary player. He composed much but published little, and a small piece for the piano entitled: 'Beautiful Belles,' is believed to be the only composition that now bears his name. Like Purkis, he performed frequently on the apollonicon, which sometimes led to a little rivalry, but few men were ever more free from vanity than Mather.

Stiles was for many years organist at St. George's, Bloomsbury, and the musical instructor at the School for the Indigent Blind, Southwark, both of which positions he filled with zeal and ability. Not the least pleasing instrumentalist of the period under review was Mr. Warne, many years organist of the Temple Church, from which office he retired on a small pension.

Notwithstanding the many brilliant performers who have existed, a strong and widely diffused prejudice has frequently been created against blind organists: this has no doubt to some extent been caused by the occasional employment of inefficient persons from motives of benevolence, but the inference that because some blind persons are incapable, therefore all must be inefficient, is so manifestly contrary to the dictates of reason and justice that it may well be matter of surprise that any sane person, much less a clergyman of the Church of England, should be willing to accept such a notion; it is, however, unfortunately too true that a very large number of educated men have been found to adopt this absurdity. To such an extent indeed did it prevail at one time that almost every advertisement for an organist contained the announcement, "No blind need apply;" and writers in public journals were not ashamed to display their imbecility, or something worse, by flippantly arguing for the total exclusion of blind organists from churches.

In December, 1856, Miss Northcote became a candidate for the situation of organist at St. Ann and St. Agnes, near the Post Office, London, and a very strong

party was immediately formed to oppose her election on account of her blindness. In advocacy of the objects of this party an article appeared in the 'Musical Gazette' of December 13th, 1856, and the author of this volume, feeling it to be his duty to reply to the obnoxious paragraph, wrote the following letter, which appeared in the 'Musical Gazette,' December 20th, 1856 :—

To the Editor of the 'Musical Gazette.'

"Sir,—Having been a subscriber to your generally excellent publication from its commencement, I take the liberty of informing you that I was greatly surprised on reading, in your number for December 13th, an article, the object of which was to show the impropriety 'of electing or even admitting to competition blind organists, under any circumstances.' This you endeavour to prove by entering into a detailed explanation of the difficulties to be encountered by organists generally, in efficiently discharging the duties devolving upon them. Now it is obvious that these difficulties are common alike to the sighted and to the blind organ students, with this difference, that the latter, having one sense less, are entitled to more credit when they succeed in conquering them, which you admit has been done, and which I am in a *position* to prove is daily being done. You passed a just encomium on Mather, Warne, and Purkis; but why was the name of the blind composer, Stanley, omitted, to whose organ performances Handel delighted to listen? and, if those blind professors were ornaments to the musical circles of the last generation, I ask, in the name of justice and common sense, why the blind of the present generation should be excluded from competition with their more fortunate contemporaries? I know that the difficulties in the management of an organ have been

greatly increased by the modern improvements in that instrument. But while there are such talented performers in our own country as *Messrs. Creswick, Pritchard, J. L. Summers, Swanson,* and others, and while the musical services of forty Roman Catholic churches in Paris and its environs, are conducted by blind organists, let it not be said that they are incapable of managing that noble instrument. Hoping, that in justice to our thirty thousand blind countrymen, you will insert this communication in your next number, I enclose my card, and am, Sir, your obedient servant,

"W. Hanks Levy.

"Superintendent of the Institution of the Association for Promoting the General Welfare of the Blind."

As our readers may like to know the result of this affair, we have great pleasure in being enabled to state that Miss Northcote succeeded in obtaining the situation at a salary of £40 per annum, and that her performances have given so much satisfaction that she has now held the appointment for upwards of fifteen years. This success was not sufficient to prevent further hostility and misrepresentation, for in the following year a wholesale attack was made on blind organists by Mr. Chipchase in one of a series of articles which appeared in the 'Morning Advertiser' under the title of 'Music's Mission,' and as the present writer had just succeeded in forming an association of blind musicians, one of the objects of which was to counteract the evil effects of such mischievous paragraphs, he sent the following letter to the 'Morning Advertiser,' which duly appeared in that journal.

MUSIC'S MISSION AND THE BLIND.

To the Editor of the 'Morning Advertiser.'

"Sir,—Having the honour of being the Secretary of the 'Association of Blind Musicians,' and being myself deprived of sight, I am impelled by personal feeling and public duty to trouble you with a few remarks on one of the most extraordinary paragraphs that perhaps has ever appeared in your widely circulated journal. I allude to the unprovoked attack made on blind organists in an article which appeared in your impression on Wednesday, November 11, entitled, 'Organs and Organists,' which was the sixth of a series of letters on 'Music's Mission.'

"The writer, after referring to the prevalence of bad organists, defines the qualifications which he thinks requisite for the efficient discharging of the duties of that position, and then states, at some length, the reasons why the musical services of the church are so often badly conducted, after which, in speaking of the various classes of unqualified organists, he deigns at length to notice organists who are deprived of sight, when he makes this astounding declaration:—'And blind men are appointed from motives of charity, in which cases the organ-blower is by far the greater functionary.' Now, Sir, I am bound to give a positive denial to this statement. There can be little doubt that some sightless persons hold their appointments more from the sympathy which is felt with their affliction than from their professional merit, but blind organists, as a class, are not appointed from motives of sympathy, but on the contrary, have more difficulties to contend with in their election than those who see. Yet, it is not enough that the writer of this paragraph stigmatizes the fifty blind ladies and gentlemen who hold organist situations in England, as recipients of alms, but he adds insult to misrepresentation. In such cases, he

says, 'the blower is the greater functionary.' Oh! Sir, is this the way in which such distinguished musicians as Mather, Purkiss, and Lockhart are to be spoken of by the Chipchases of our day? Is this the reward which the numerous blind musicians of the present time are to receive for their labours, who spend days of arduous study, and in many instances nights of racking anxiety in prosecuting their favourite science, and contending with the evils of their position?

"Let these questions be answered by the public generally, and especially by the musical profession. What does your correspondent think of the great Handel, whom he professes to revere, attending frequently at St. Andrew's, Holborn, to hear Stanley, the celebrated blind musician, conduct the service; or of Wesley, Crotch, and the other eminent masters of the last generation, affording their patronage to numbers of blind organists? These great minds, although they are not among us to defend the cause of the afflicted, yet speak through the testimonials they have left behind them, and are worthily represented by those eminent advocates of professional justice, Goss, Hopkins, and Turle. But if it be said this is all statement, not proof, I reply, in brief, we have twenty-nine blind organists who hold situations in London, who will be glad at any time to afford opportunities to impartial judges, if any such there be who need opportunities, to decide whether or not blind organists are superior functionaries to organ-blowers. But let our depreciators beware, for the greatest of Britain's poets, John Milton, has said, 'And surely we, the blind, are not the least care of God. Woe, woe to him who mocks, to him who harms us! Us, whom the Divine law, the Divine power, has not only shielded from injury, but has almost rendered sacred. He seems, indeed, to have brought this darkness upon us, not so much by the bedimming of our eyes as by the overshadowing of His heavenly wings; a darkness which He not

seldom illumines with interior and far more gracious light.'

"Feeling assured, Sir, that the columns of your very influential paper, which have ever been open for the advocacy of truth, will not be closed to this appeal in behalf of justice for the 30,000 blind in the United Kingdom,

"I am, Sir, your obedient servant,

"W. HANKS LEVY,

"*Hon. Secretary to the Association of Blind Musicians.*

"*Saturday, Nov. 14th,* 1857."

The effect of this correspondence was most gratifying, for from that time to the present, a period of about fourteen years, no attack on blind musicians has appeared in print, either in the form of a letter or of an advertisement.

The testimony in favour of blind musicians, afforded by a letter from the eminent composer, and organist of St. Paul's, John Goss, is so strong that we cannot forbear inserting it in this place. Writing to a friend in 1856, Mr. Goss says:—

"I feared it would be some time before I should be able to call in and hear your young friend Summers play, but this afternoon I found an opportunity, and can assure you that I was very much struck and delighted with his performance both on the organ and pianoforte. He played a difficult piece of Mendelssohn's in F minor on the organ exceedingly well, managing hands and feet in a manner that we old ones should very much like to be able to equal.

"I also got him to give me some other pieces,—for example, a Psalm tune, a chant, and Handel's 'Zadock the Priest,' (the Coronation anthem). In all he showed himself the skilful musician.

"On the pianoforte he gave me Thalberg's Grand Fantasia on airs from 'Mosè in Egitto,' and very brilliantly he executed it. He is really an exceedingly

good performer on both instruments, and his father must indeed be well satisfied with him. He has capital instructors, and should he chance to go on still further he will put a good many of us 'professors' out of court."

About the year 1787 a gentleman named Cheese invented a system of tangible musical notation, for which he obtained the gold medal of the Society of Arts, London, and three or four similar contrivances were introduced a few years later.

The plan adopted by Mr. Cheese, and those who laboured in the same field, consisted of a board four or five feet long, and from two to three feet broad, across which, running lengthwise, were fastened a series of wooden lines separated into groups of five, like the common musical stave; the groups being divided by a line with its surface somewhat more rounded than the others. The lines were raised about a quarter of an inch above the board, were about half an inch wide, and were placed at the same distance from each other; holes were drilled both in the lines and spaces about half an inch apart, into which were placed, at will, wooden or metal pegs, having on their upper ends various signs indicative of the crotchet, the quaver, the bar, etc. In some of the methods signs were used exactly resembling the common musical notation, but in others symbols of a plainer description were employed; such as a peg with a square top, and a peg with a round top being used to indicate different notes. By means of these boards the blind were enabled to arrange their lessons as read to them by their instructors, and to study them whenever they might think fit, and we have known several musicians of eminence who derived great advantage from such contrivances on commencing their career as students. Some persons have formed the musical stave by sewing pieces of cord upon a cushion; the softness of the cord and the cushion allowing common pins, bent in the middle,

to be thrust into them in different positions, and thus to represent semibreves, minims, etc., according to the direction in which the heads of the pins were turned. The celebrated Haüy, about the time that he introduced embossed reading, commenced to print common music in relief, but his attempts were so defective that the plan was soon given up. Similar experiments were also made by the Rev. W. Taylor of York, and by Mr. Alston of Glasgow with like results.

In 1840 a more successful effort was made at Philadelphia, where the first volume of a selection of church music was printed in relief, with type invented by M. Snider. The tunes of this volume were arranged in the four voice parts, with figured bass, and words; the lines of the staves were well defined, but the notes were somewhat indistinct. In 1862, the present writer, being desirous of seeing some more effective means exist for enabling the blind to become efficient musical teachers of sighted pupils, produced in an embossed form the first volume of Hamilton's Modern Instructions for the Pianoforte. This work, by placing under the fingers of the blind teacher exactly the same musical characters and explanations as those read in black print by ordinary pupils, enables him to form a just appreciation of the nature of the difficulties with which the sighted beginner has to contend, and to offer such verbal explanations as may remove those difficulties; it also tends in no small degree to create confidence in the public mind, respecting the qualifications of professors of music without sight. This volume was printed from tin plates on which pieces of copper wire were soldered. The notes were made higher and thicker than the lines of the stave, so that they could be felt with ease; the letter-press was in the common English alphabet, greatly modified to meet the requirements of the sense of touch. Sufficient demand for this work at present exists to

justify the author in publishing a second part, but other engagements render such an undertaking impossible. Several persons have made use of the letters employed in different systems of reading for the blind to construct various methods of tangible notation. The plan generally followed is to indicate a given sound by a letter, the duration of the sound by another sign, and its pitch by a third character, thus:—A minim on the first ledger, above the treble stave, is shown by the letter A and two other characters. Although the contrivances above named, generally agree in these particulars, yet they differ in many other respects, but the divergences are not of sufficient importance to be examined here.

Among inventors of Tangible Notation may be mentioned Mr. Frere, who about the year 1845 published an embossed explanation of his system, to which were attached several psalm tunes, and other short pieces. He also endeavoured to raise a fund for the special object of printing music for the blind, but with very little success. The characters employed in this system are the same as those used by Mr. Frere in his mode of reading, and it is singular to observe that four distinct signs are used to express the same note, according as it may be in the treble, alto, tenor, or bass clef. About the same time, Mr. Wood (late Master of the Schools of the London Society for Teaching the Blind to Read, then located at Queen Square, Bloomsbury, but now established at St. John's Wood) adapted Lucas's characters to musical notation, and printed some short lessons as specimens. As however, three lines of reading were required for the treble stave, and three for the bass, the attempt was not very satisfactory, and was given up for a time. At length, the inventor having received some suggestions from the present writer respecting the way in which the music belonging to each stave might be brought into one narrow line like common reading,

the experiments were resumed, and in 1854 a volume was published, containing a collection of one hundred and twenty psalm and hymn tunes, and thirteen chants, which was very useful in enabling the blind to sing by touch, and to learn music for themselves. Great credit is due to Mr. Wood for the way in which this book was executed, and the low price of four shillings greatly enhanced its value. It is however now out of print, which is very much to be regretted. The greater number of characters used in Lucas's system consist of two parts, viz. a line and a dot, and this circumstance was taken advantage of in musical notation, to represent in most cases the note and its time by one character; *e.g.* Lucas's letter H is a perpendicular line, with a dot at the left at top, and in the system of music this represents F or Fa, a semibreve, the perpendicular line indicating the sound F or Fa, and the dot at the left at top, showing it to be a semibreve. Mr. Wood also invented an appliance for writing Lucas's characters, which was available for music. Mr. G. A. Hughes, about the year 1848, adapted his system of embossed reading to music, but very little success attended his efforts. Mr. Moon, of Brighton, has also employed his alphabet for the same purpose, but only a few psalm tunes have been issued. Besides the common system of musical notation, several plans have been devised in France for the same purpose. In that of M. Rousseau, the common letters are used to indicate sounds, and other characters are employed to mark the signs of time, etc. M. Braille, soon after inventing his system of pointed writing and reading, adapted his alphabet to musical purposes with great success, and this mode prevails not only in France, but also in Belgium, Switzerland, Spain, Brazil, in some parts of Germany and the United States, and it is not altogether unknown in England. M. Gaudet has produced a method by the union of the inventions of Messrs. Rousseau and Braille,

but we believe that no books have appeared embossed on the plan. M. Braille's mode has many advantages, but, as it is entirely composed of one kind of dot, the absence of variety prevents easy and fluent reading. The fact, however, that it is capable of being printed by hand is of great importance, as at institutions it enables pupils to emboss music, and lend the copies among themselves, and in this way works may be greatly multiplied, as he who has borrowed a book, or a piece of music, can copy it for himself before returning the original. Mr. Mahony, of the United States, has also contrived a system, consisting of a combination of the ordinary musical notes, and the letters and figures of the alphabet, which are arranged above and below a line, but the details are too intricate to meet the necessities of the case. We must not omit to mention the plan introduced by D. Pedro Llorens, Professor of Music at the School for the Blind at Barcelona, which consists of curved and straight lines and dots in various positions, so arranged as to indicate the different musical signs. And mention must also be made of a system invented by D. Abreu, of Madrid, which resembles very much the method of M. Braille.

Some sixteen years ago, the writer adopted a mode of musical notation, which made the appliance for enabling persons to write with pin type, so that their letters may be read by the blind, and by the sighted, also available for music. The first seven letters of the alphabet represented the musical sounds of the same names, and the various signs of time were indicated by the same letters being placed in different positions, *e.g.* the letter C, when placed in its ordinary position, with the opening to the right hand, indicated C a crotchet; when the opening was to the left, C a minim; when the opening was turned upwards, it was C a semibreve, and when downwards, C a quaver. The other marks were equally simple, and the arrangement has been found of service by several persons

who use the writing desk. The author has also contrived a plan by which the arithmetical apparatus explained in the appendix is capable of being used as a music board. By this method musical compositions may be set down in as short a time as they can be written by a sighted person, and it also possesses the advantage of enabling embossed copies to be taken when required. It is much to be regretted that writing music by means of electricity has not been brought to such perfection as to place it within the reach of the public at large, for in such a case the blind would be great gainers, as by simply playing any piece on a musical instrument the composition would be indelibly recorded in print. More than one machine has been introduced for this purpose, and we are at a loss to know what prevents the full development of the scheme. Surely writing music is not a greater undertaking than sending a message round the globe in an instant of time. And here we insert a brief notice that appeared in the journals of July 1863, respecting an apparatus for printing music by electricity, which is as follows:—

"The Electro-Magnetic Phonoscope. — A musical machine, for registering music instantaneously as played, has been invented by Mr. J. Beverley Fenby, of Bute Villa, St. John's, Worcester; according to the local 'Herald.' The machine is small, and its motive power is electro-magnetic, produced by a voltaic battery, and working in a manner analogous to the printing-telegraph. The machine having been placed *en rapport* with the instrument to be played upon, say pianoforte, harmonium, or organ, the player manipulates the keys in the usual manner, and the machine prints his performance as he goes along, at a speed proportionate to his playing, the usual rate being fifteen inches of paper per minute. The printed notation is identical with that already in use, the only difference being that the heads of the notes are square

instead of round. The printing, adds our authority, is clear and well defined, and the performer feels not the least impediment or hindrance to his playing from the machine, however rapid or complicated his ideas may be. The performer may compose, play, and print at one and the same time.

"The patent for the invention has just passed the great seal."

Of the various branches of the musical profession open to the blind, not the least profitable is that of tuning pianofortes, and although less attention has been paid to the subject in this country than it deserves, yet many persons have followed it with profit, and some have even acquired a considerable reputation in its practice. Among the most successful tuners must undoubtedly be reckoned Mr. Limpus, late of Isleworth, whose regular practice included the principal towns within twenty miles of the metropolis, and was sufficiently remunerative to enable him to keep a servant and a horse and chaise for professional purposes. Mr. Limpus taught several blind persons the art of tuning, in connection with the Association of Blind Musicians, and this example has since been followed by more than one institution. Some years ago, the Messrs. Broadwood, it is believed, gave regular employment to a blind man as a tuner, who travelled the country as a representative of the firm. Messrs. Mather, Warne, Wright, and Fitzgerald also excelled in this art, and were quite equal to any of their sighted competitors. To succeed in this branch of the musical profession, it is desirable that a person should have a mechanical turn as well as a correct ear, that he may be enabled to put on strings, mend hammers, and attend generally to the action of instruments, without being obliged to call in the aid of a sighted helper. A small book is published by Messrs. Cocks and Co., of New Burlington Street, entitled, 'Hamilton's Art of Tuning the Pianoforte,' which, as it contains much

useful information, we venture to recommend to the notice of those interested in the subject. To be a successful tuner it is not necessary that a person should have what is generally called a good musical ear, for excellence depends more on the correctness acquired by practice, than upon any natural acuteness of the auditory nerve; in fact, those who have great quickness of hearing are often indifferent tuners. The practice of the art, however, makes great demands on the nervous system, and should not be followed by any one having a weakness in that direction. It has often struck us that much difficulty might be saved if (instead of tuning in the ordinary way by bearings) a fork were used for every note; in this way only twelve forks would be required, and while certainty would be guaranteed, the trouble would be greatly lessened. The plan would not at all interfere with the system of equal temperament, as the tuning-forks might be made of the required tones. In France great attention has been paid to the subject of tuning, and one of the late pupils of the Paris Institution for the Blind, M. Montal, has not only reached great excellence in that art, but has also acquired a considerable reputation as a manufacturer of musical instruments. He obtained a medal of the first class at the Paris International Exhibition of 1855. He also had the honour of being appointed pianoforte maker to the Emperor Napoleon and the Emperor of Brazil, and he was created a Chevalier of the Legion of Honour of France, and of the order of the Rose of Brazil. How much of the handicraft-work connected with pianofortes was done by Montal himself we are unable to say, as he employed many sighted workmen; but his success as a manufacturer is worthy of the highest praise. A few persons have obtained a moderate degree of success as blind vocalists, but efforts in this direction, for the most part, have proved failures. Why this should be, appears at first sight somewhat strange, as the absence of vision interferes in no way with the action of the voice.

On considering the subject, however, we find that there are certain matters of detail, which fully account for the circumstance. The object of an audience in attending a concert is to obtain as great an amount of pleasure as possible, and it must be admitted that contact with affliction in any form is ill calculated to promote the kind of pleasure sought, and it is therefore matter of surprise that whenever a vocalist without sight has been announced, his blindness has been made a prominent feature of the placard. Of course the idea has been to excite sympathy, but that is just what people want to have nothing to do with in a concert room. Why should not blind vocalists take their stand like other persons, simply on their professional merits? We believe that, if such a course were adopted, success in this department would be much more frequent. The use of coloured spectacles would aid very much in this endeavour; and, so far from making their misfortune known, the blind should do all in their power to conceal it, for it should be remembered that patronage always comes to the strong, and avoids the weak, and that as far as men are concerned we should conceal our defects and make the public feel the force of our excellences. In Paris there is an entertainment given every evening at a public room, named the Café des Aveugles; but all that the blind have to do in the matter is to perform the orchestral parts. There are burlesques, stage-plays without scenery, and vocal performances; but those who take part in them can see. The blind musicians are miserably paid, and we believe that the moral repute of the house is far from good. Brass and string bands have been established in various blind schools, but the pecuniary results of such undertakings have been meagre in the extreme, and with regard to the use of brass bands it may be stated that as the use of wind instruments is very injurious to the nervous system, and as the blind generally are very sensitive in this direction, any great development of such enterprises is not to be desired.

Sculptors and their Art.

The sculptor's art seems to depend so much upon the sense of touch, that it is matter of surprise that its practice by the blind is not of more common occurrence. Perhaps this may be accounted for by want of opportunity, for, with the exception of the Italians, it is not at all an easy thing for any one to obtain admission to a sculptor's studio to examine the artistic processes there carried on.

Under these circumstances, we are not surprised to find that although some persons without sight have reached great excellence in sculpture, yet the number of such artists is very small. Towards the end of the seventeenth century, Roger de Piles, the eminent French painter, saw in Italy a blind man, about fifty years old, in the Justinian Palace, modelling in wax a statue of Minerva.

The Duke of Bracciano, having some doubt of his being blind, caused him to perform his work in a cellar. But this only served to show still more strikingly the force of his genius, as the bust executed in the dark apartment was a perfect imitation of the original, who was none other than the duke himself, who had allowed the sightless artist minutely to examine his features. It having been remarked that the abundance of hair on the duke's face made it much more easy to copy than if such an appendage were wanting, the blind sculptor requested and obtained permission to examine the face of one of the duke's daughters, of which he succeeded in making an exact resemblance. This artist also successfully executed a statue of Charles I. of England, and one of Pope Urban VIII., which have been highly commended. Many persons suppose that the sculptor to whom reference has been made is the same as some writers describe under the name of Giovani Gonnelli, sometimes called Gambasius, or Gambasio,

after the place of his nativity, a small town in what was formerly the Grand Duchy of Tuscany. It is said that he lost his sight at the age of twenty and remained unoccupied for ten years, when, on a sudden, he became possessed with a strong desire to model a figure, and, although he had never been taught the elements of sculpture, he succeeded so well as to astonish the most accurate judges in Italy, which is pre-eminently the land of art. He obtained the patronage of the Grand Duke of Tuscany, and of other illustrious personages. Dr. Guillie, in his work on the blind, mentions, as an instance of an eminent sculptor, the case of M. Baret, who, about the beginning of the nineteenth century, having become blind from smallpox at the age of twenty-five, continued to practise his profession, and executed works which were the admiration of the members of the French Academy. Early in the present century was born Joseph Kleinhans. He was a native of the Tyrol, in the Austrian empire, and lost his sight from smallpox at the age of five years. He early evinced a strong inclination for carving, which he manifested by cutting figures out of stray pieces of wood that fell in his way. Before the age of twelve years he executed a figure of the Saviour of life-size, which so astonished his friends, that they placed him under the instruction of Herr Nissl, an accomplished artist of Fugan, in whose studio he soon reached great perfection as a modeller and carver, and subsequently became famous throughout Germany as the "Blind Sculptor." Kleinhans' works were both numerous and varied, and it is said that he executed more than four hundred statues of the Saviour, which still exist. One of his principal works was a bust of Francis Joseph, the present Emperor of Austria, which has been generally admired, and is now preserved at Vienna. This production our blind artist completed only two months before his death, which occurred at Nauders, on July 10, 1853.

From the incidents mentioned in this article we think it may be gathered that every facility should be put in the way of the blind to enable them to develope any latent talent they may possess for the cultivation of the various branches of sculpture, and that modelling in clay and wax, and carving in wood, are quite within their reach, to which, perhaps, may also be added the execution of works in marble.

The sculptor's art is fitted to be an occupation for the well-to-do blind, and should be made one of the branches of their general education. For any one possessed of moderate taste it would be a very pleasurable employment, and for those exhibiting decided talent it might become a source of profit.

The Blind Eminent in Trade and Manufactures.

John Metcalf, the Builder and Contractor, etc.

John Metcalf, the greatest blind mechanic who ever lived, was born at Knaresborough, in Yorkshire, on the 15th of August, 1717, and, according to his autobiography, was put to a common school when four years old by his parents, of whom he speaks as being "working people." At the age of six he was attacked by smallpox, which resulted in total blindness. He soon, however, began to walk alone, and before the age of nine could find any part of his native town without a guide; going birds'-nesting with boys of his own age, climbing trees, and finding the nests by direction of his companions, were among his favorite pastimes. He often wandered alone three or four miles into the country, and as his father kept horses, he soon learnt to ride, in which he acquired such excellence that he took to following the hounds. A gentleman of the neighbourhood, named Woodburn, was very kind to Metcalf, in taking him to hunt, and lending him his dogs to go out at night when the hares were feeding,

which Metcalf frequently did unattended by any human companion. When about fourteen years old, his enjoyment of life was so great, and his experience of the world so little, that he considered the loss of sight to be an advantage rather than a defect. He was soon, however, convinced of his mistake by the following circumstance:—Being engaged with some of his companions in robbing an orchard, and surprised by the owner, his associates made off as fast as their legs would carry them; but Metcalf, being up a plum-tree, and unable to perceive the direction the farmer was taking, or the obstacles that lay in the way of his own escape, had scarcely reached the ground, when he fell headlong into a gravel-pit, and so cut his face that he was afraid to venture home for fear of his father's chastisement.

At the age of fourteen he learnt to swim, and was often employed to rescue property lost in the river Nid, and to recover the bodies of drowned persons; which were performances of great difficulty, on account of the peculiar circumstances connected with the river. To dive to the depth of twenty-one feet, in places where the currents opposed each other so much that the lightest objects sunk permanently to the bottom, was one of Metcalf's special exploits. At the age of thirteen his father had him taught the violin, and the youth, having become tolerably proficient in country-dance music, attended the fortnightly meetings at the Knaresborough Assembly Rooms, and also performed at other places where dancing was practised. In 1732, when only fifteen years old, he was invited to become violinist, or as he himself puts it, 'fiddler' at the fashionable watering-place of Harrogate, in which position he gave great satisfaction; the orchestra consisting only of himself and a youth who could see. As these musical engagements were principally in the evening, he had ample time during the day to devote himself to his favourite pastime of hunting, to which

was added that of racing, he having bought a horse which often ran for small plates. It must not, however, be supposed that Metcalf's early life was passed in uninterrupted virtuous activity, for we find that he was addicted to cock-fighting, and was a great frequenter of pot-houses. We may note that at the age of twenty-one he was six feet in height, and stout in proportion. He had the reputation of being a good boxer, but he only employed the art in self-defence. Being summoned before the magistrates, on account of an affiliation case, Metcalf fled, and took passage in a vessel laden with alum, bound from Whitby to London, in which latter place he stayed some time, and acquired much desultory information.

In London he made himself known to many gentlemen who had patronized his musical performances at Harrogate, and among others to Colonel Liddell, M.P. for Berwick-on-Tweed. This gentleman, being about to return to Harrogate, offered Metcalf a seat in his coach; but he, thanking the Colonel, declined the offer, saying that he could walk as far in a day as he, the Colonel, could choose to travel. Accordingly, on a given day, the Colonel and suite, consisting of sixteen servants on horseback, set off, Metcalf starting about an hour before them, and arriving every evening at the appointed halting-place sufficiently early before the Colonel and his escort to enable the hotel-keepers to prepare for their guests. On arriving at Harrogate, he found that things had settled down, which quite relieved him from further apprehension. We now approach a crisis in Metcalf's history. He had long been attached to a daughter of the landlord of the Royal Oak—afterwards called the Granby—at Harrogate, and his affection was fully returned by the young lady, but the disparity in their circumstances prevented any avowal of regard. So little, indeed, was any engagement considered likely, that a suitor for her hand asked Metcalf to use what influence he might have in his

favour. It, however, came about that Metcalf was suspected of coolness by his innamorata, who, in consequence, accepted the advances of her well-to-do suitor. On the day, however, before that fixed for the wedding, Metcalf, on riding pretty smartly past the Royal Oak, towards the Queen's Head, was loudly accosted in these words: "One wants to speak with you." He turned immediately to the stables of the Oak, and, to his joyful surprise, found there his favourite, who had sent her mother's maid to call him. "Well, lass," said he, "thou's going to have a merry day to-morrow; and I am to be the 'fidler'?" "Thou never shalt fiddle at my wedding," replied she. "What's the matter? what have I done?" said Metcalf. "Matters may not end," said she, "as some folks wish they should." "What!" said he, "hadst thou rather have me? Canst thou bear starving?" "Yes," said she, with thee I can!" "Give me thy hand, then, lass! Skin for skin, it's all done!" The servant-girl who had called him, being present, he told her that as she and his horse were the only witnesses of what had passed, he would kill the first who should divulge it. The sequel can readily be imagined. Blind Jack, the 'fidler,' ran away with Miss Benson, the publican's daughter, and the prettiest girl in the town. When the heroine of this drama was, some time after, asked why she had refused so many good offers for Blind Jack, she replied, "Because I could not be happy without him;" and, being more particularly questioned, she said, "His actions are so singular, and his spirit so manly and enterprising, that I could not help liking him." Metcalf, having been interrogated on his part as to how he had contrived to obtain the lady, replied that "Many women were like liquor merchants, who purchase spirits above proof, knowing that they can lower them at home." After the wedding, Metcalf went to Harrogate, as usual, in fulfilment of his musical engagements, always however avoiding the sign of the

Oak, which house was kept by his mother-in-law. One day, however, having had rather too much to drink, he accepted a wager, rode boldly up to the door of the house, and called for his favourite beverage. On seeing Blind Jack the women at the bar took fright, and sought refuge upstairs, fearing, no doubt, that he had come for no good. Metcalf on this rode through the house from front to back, and, as there were no men at home, he departed without molestation to receive the proceeds of his wager. Heavier cares, however, soon demanded his attention, and he was not found wanting; a family was coming on, and as a first step of preparation, Metcalf determined to provide himself with a house. He, therefore, bought an old tenement, pulled it down, and built a new house on the ground; the stones for this house he procured himself from the bed of the river, and got masons to erect the building at a very cheap rate. His wife having presented him with a son, some friends seized on the opportunity to bring about a reconciliation between Metcalf and Mrs. Benson, his mother-in-law; and when a daughter was added to the family, the mother-in-law became her godmother, and testified to the fulness of her forgiveness by presenting the family with fifty guineas. Metcalf now abandoned all his former sports, and devoted himself in real earnest to business. He conceived and carried out the enterprise of setting up the first four-wheeled chaise that plied in Harrogate for hire; and he also ran in connection with it what was called a one-horse chair. This double undertaking he continued for two summers, when, being opposed by the innkeepers of the town, who started rival carriages, he abandoned the scheme, and devoted his attention to other pursuits. He purchased several horses, and set up as a fish-salesman, carrying the fish in panniers from the coast to Leeds and Manchester. To such hardships did this calling expose him, that he often walked thirty-six hours with scarcely any rest;

and in one of these expeditions, on his way from Knaresborough to Leeds in a snow storm, while crossing a brook the ice gave way under one of the horses, and Metcalf was compelled to unload the panniers to get him out of the water; but the horse as soon as free ran back to Knaresborough, leaving Metcalf with two panniers of fish and three loaded animals, which, together with the badness of the night, caused him no small perplexity. After much difficulty, however, the weight was divided between the other two horses, and the fish was delivered in Leeds in sufficient time to procure a sale.

The profits in this business being very small, Metcalf soon gave it up, and attended at Harrogate as a player on the violin in the long room.

This he continued until the breaking out of the Scotch Rebellion, in 1745, when he was induced to attach himself as a musician to a volunteer company raised by Mr. Thornton, a Yorkshire gentleman. In this new capacity, Metcalf was highly successful as a recruiting agent, and was invaluable in keeping up the spirits of the troops on the march. He shared with his company the distresses occasioned by the defeat of the English at Falkirk, and took part in their triumph at the decisive battle of Culloden.

On being asked by an English cavalry officer how he managed to escape from Falkirk, he sarcastically replied, "I found it very easy to follow the sound of the feet of the horses, as they made such a clatter over the stones." Captain Thornton having been missed after the engagement at Falkirk, Metcalf undertook the task of discovering his fate, and succeeded in passing the enemies' lines under the plea that he wished to join their cause. In this way he managed to elude suspicion for some time, and actually succeeded in obtaining an audience with the rebel general Lord George Murry, who believed so strongly in Metcalf's attachment to the Stuart cause, that he

gave him half a glass of wine, an article, by the way, very scarce in the Highland army. After some time, however, he was recognized by a person who had known him in England, and being brought before a court-martial, after some investigation, he was acquitted, and allowed to proceed on his journey to join, as he said, Prince Charles. At length, being unable to obtain any tidings of Captain Thornton, he returned in company with a rebel spy to Edinburgh, where to his great delight he found his master safe and well, he having escaped through the enemies' lines disguised as a journeyman carpenter, after having been secreted several days in the cupboard of a room at Falkirk, where the Scotch chieftains daily held their council; the concealment being effected by a dresser, so placed as to hide the cupboard-door, and he being supplied with food at night by the faithful woman who kept the house. So well was Captain Thornton pleased with Metcalf's conduct, that he said he would give a hundred guineas if he could put an eye into the head of his blind champion.

While in Scotland Metcalf played the violin at a ball given by the Duke of Cumberland, the Commander-in-Chief of the Royal Army. He was the only musician engaged, and the duke, who himself danced at the ball, afterwards sent him two guineas. When campaigning was over, our blind soldier returned to his Yorkshire home, and commenced to turn the knowledge he had acquired in his travels to profitable account, by becoming a dealer in Scotch woollen goods.

In the prosecution of this trade, he travelled frequently from Scotland to Yorkshire, calling on the road at every house where he might be likely to obtain a customer. He also dealt in horses, and was no inconsiderable adept at the contraband trade, the profits of which, he naïvely remarked, "were greater than the risk." After some time, these varied occu-

pations were abandoned, and preference given to a stage-waggon, which he ran between York and Knaresborough. This was the first enterprise of the kind started on that road, and Metcalf himself went twice a week in summer and once in winter with the stage. With this employment he also combined that of carrying goods for the army, in which he was very successful. As, however, change seemed to possess a peculiar attraction for him, he, after a short time, sold his carrying business, and devoted himself chiefly to contracting for the construction and repair of public roads. An Act of Parliament having passed for the making of a turnpike-road from Harrogate to Boroughbridge, a person named Ostler, of Farnham, was appointed surveyor; and Metcalf, falling in company with him, agreed to make about three miles of the road, viz. the part between Menskip and Fearnsby. All the materials were to be procured from one gravel-pit, and Metcalf, therefore, provided deal boards, and erected a temporary house at the pit, he also took a dozen horses to the place, fixed racks and mangers, and hired a house for his men at Menskip, which was distant about three-quarters of a mile.

He often walked from Knaresborough with four or five stone of meat on his shoulders, and joined his men by six in the morning, and by the varied and efficient means employed he completed the work much sooner than was expected, to the entire satisfaction of the surveyor and trustees. During leisure hours he studied measurement in a way of his own, which enabled him to reduce the contents of a piece of timber to feet and inches, and to specify the dimensions of any building. Near the time of the finishing of the above-named road, the building of a bridge was advertised to be contracted for at Boroughbridge, and a number of gentlemen met at the Crown Inn to receive tenders, and Metcalf was one of the competitors. The masons varied considerably in their estimates.

Ostler was appointed to survey the bridge, and Metcalf told him that he wished to undertake it, though he had never done anything of the kind before. On this the surveyor acquainted the gentlemen with what Metcalf proposed; and when the blind engineer was sent for, and asked what he knew about a bridge, he told them that he could readily describe it, if they would take the trouble to write down his plan, which was as follows:—"The span of the arch 18 feet, being a semicircle, makes 27: the arch stones must be a foot deep, which, if multiplied by 27, will be 486, and the bases will be 72 feet more: this for the arch. It will require good backing, for which purpose there are proper stones in the old Roman wall, at Aldborough, which may be bought, if you please to give directions to that effect." The gentlemen were surprised at his readiness, and agreed with him to build the bridge. The other persons who had given in estimates were much offended; and as the materials were to be procured from a quarry belonging to one of them, he was unwilling to sell any to Metcalf, who thereupon sent to Farnham and procured stones, which the lime-burners had left (as they were too strong for their purpose). He got them dressed at the place for little money, conveyed them to Boroughbridge, and having men to take them in vehicles, set them, and completed the arch in one day, and finished the whole work in a very short period.

Soon after, there was a mile and a half of turnpike road between Knaresborough Bridge and Harrogate, which Metcalf also agreed to do. Going one day over a place covered with grass, he told his men that he thought it different from the ground adjoining, and would have them try for stone or gravel, which they immediately did, and found an old causeway, supposed to have been made by the Romans, which afforded many materials for making roads. Between the

Forest-lane Head and Knaresborough Bridge there was a bog, over which the surveyor thought it impossible to make a road, but Metcalf assured him that he could readily accomplish it. The other then told him that if so, he should be paid for the same length as if he had taken the road by the circuitous route originally proposed. The blind man therefore set about the work. He raised the ground and covered it with whin and ling, and made it as good as any other road. He received about four hundred pounds for this undertaking, and for a small bridge, which he had built over a brook called Stanbeck.

A road being projected between Harrogate and Harewood Bridge, six miles in length, a meeting was held (the late Lord Harewood and Mr. Lascelles being present) to contract with any person who might be thought fit to undertake the work. A great number of estimates were presented, but Metcalf obtained the contract. It was to be completed before the winter, and the soil being stiff clay, it was judged expedient to cast the whole length before they began to stone it. He therefore arranged that no carriages should pass while the road was being made, and, by way of prevention, sluices were cut at each end of the lane, across which draw-bridges were thrown when his own waggons brought materials. He also opened two houses to entertain travellers and the people employed on the works, as there were not sufficient taverns in the neighbourhood. The short time allowed for the completion of the contract obliged him to adopt the most expeditious means for pushing forward the work, and among other ingenious contrivances, he employed a wheel-plough drawn by nine horses as the best and most expeditious way of getting up the roots of whin and ling in parts of the forest where they were strong, and, as he was compelled to superintend the work himself, he obtained leave from the innkeepers at Harrogate to engage

a musician to play at their houses in his absence. He completed his contract for the road within the time appointed, to the entire satisfaction of the trustees, and received for the work twelve hundred pounds.

There being about a mile and a half of road to be made through part of Chapel Town to Leeds, Lord Harewood and other gentlemen met at the Bowling-green, Chapel Town, to receive estimates, and Metcalf obtained the contract. He also widened the arch of Sheepscar Bridge, for which he received nearly four hundred pounds. Between Skipton and Colne, in Lancashire, there were four miles of road to be made, and Metcalf's proposals were preferred. The materials were at a greater distance, and more difficult to be procured than he expected, and a wet season coming on, made this an unprofitable undertaking, yet he completed it according to contract. He next undertook to make two miles of road through Broughton to Martin; and two miles more through Addingham, and over part of Romell's Moor.

These works he completed, and received one thousand three hundred pounds from Mr. Ingham, of Burleigh, and Mr. Alcock, of Skipton.

After this a meeting was held at Wakefield, to arrange for the making of part of the road between that town and Halifax, and Metcalf undertook to construct the four miles between Mill Bridge and Belly Bridge, which he finished, although it was an extremely wet summer. He then took three miles more which lay between Belly Bridge and Halifax, and completed it, and he also agreed for five miles between Wakefield and Chekingley Beck, near Dewsbury.

The trustees having met at Wakefield to make contracts, Metcalf engaged to construct or repair three miles and a half of road between Hag Bridge and Pontefract, and one mile and a half from Crofton through Foulby, all of which he satisfactorily completed, and received as payment six thousand four hundred pounds.

A road having to be constructed from Wakefield to Austerland, through Herbury, Almondbury, Huddersfield, Marsden, and Saddleworth, Metcalf obtaining the contract, a difficulty having arisen as to the manner of carrying out the work, the blind engineer thus addressed the trustees: "Gentlemen, as you seem to have a great deal of business before you to-day, it appears quite unnecessary to trespass upon your time on this head. I propose to make the road over the marshes after my own plan, and if it does not answer I will be at the expense of making it over again after yours." To this proposition they eventually agreed, and as Metcalf engaged to make nine miles of the road in ten months, he began in six different parts with nearly four hundred men. One of the places through which the road had to be carried was Pule and Standish Common, which water crossed in several places; but he carried it off by drains. He found great difficulty in conveying materials, on account of the softness of the ground. Many of the clothiers who passed that way to Huddersfield market, were by no means sparing in their censure, and held much diversity of opinion with regard to the success of the undertaking; but Metcalf got the piece levelled to the end, and then ordered his men to bind heather, or ling, in round bundles, and place them on the intended road, in squares of four, pressing them well down; he then obtained broad-wheeled carts, and began to load stone and gravel for covering. When the first load was put on, and the horses had gone off in safety, the people present huzzaed from surprise; and it says much for the ability of our blind contractor that this piece of road needed no repair for twelve years. Having finished the nine miles within the specified time, Metcalf took three miles from Standish to Thurston Clough, which he completed, and afterwards six miles and a half from Sir John Kaye's seat to Huddersfield; and to Longroyd and Bridge toll-bar. He also con-

structed four bridges, the span of each being twenty-four feet, and six bridges of nine feet. When all these works were finished, a meeting of the trustees was called, when Metcalf stated that the work he had completed, in addition to his first contract in the marshes and other places, was worth five hundred pounds; and after some debate he was voted three hundred pounds.

Metcalf made twenty-one miles of road, for which he received four thousand five hundred pounds. In building bridges, where the foundations were bad, he laid on a sufficient thickness of ling, or straw. He next laid planks, five inches thick, with square mortises, and, driving in a number of piles, the foundations were made secure. He then laid springs for the arches upon the planks, which caused all to settle regularly when heavy vehicles passed over; and though he built many arches of different sizes, none of his bridges ever gave way. Believing that there was a stone quarry south-east of Huddersfield, in ground belonging to Sir John Ramsden, he bored secretly in the night, and was successful in finding it; in consequence of which Sir John gave him liberty to take away stone from the quarry he had discovered. Metcalf now undertook to build houses, and among those erected by him was one belonging to Mr. Marmaduke Hebden, which was sixty-nine feet long, twenty-seven feet wide, and twenty-seven feet from the foundation to the square of the building; and it had twenty chimneys. Metcalf undertook to make the road from Dock Lane Head, Yorkshire, to Ashton-under-Lyne, Lancashire, that from the guide-post near Ashton-under-Lyne to Stockport, in Cheshire, and the road between Stockport and Mottram-Longdale, the whole length being eighteen miles. He set men to work in different parts, with horses and carts to each company; and though he lost twenty horses in one winter, he was not discouraged; observing that "horse-leather had been dear a long time, but he hoped now to reduce the price."

Notwithstanding this misfortune, he completed the whole work, including a great number of drains and arches, entirely to the satisfaction of the trustees, and received four thousand five hundred pounds. He then took eight miles more, which required several drains and arches. He raised one hollow nine yards, and built sufficiently on each side to keep up the earth, with battlements on the top, for which he received two thousand pounds. One day he was met by Sir George Warren, who inquired if he was at leisure, and, being answered in the affirmative, he desired to see him at his house at Poynton. Metcalf went, and agreed to make five miles of a private road through the park. He took twelve or fourteen horses of his own, and brought large quantities of stone into Sir George's grounds for drains. For this he received several hundred pounds, and great favours also from Sir George and his lady. A road was required to be made between Whalley and Buxton, in Derbyshire. To avoid a hill it went over a piece of ground called Peeling Moss; the whole road was intended to be four miles in length. In some places were very hard rocks, which required to be blasted. In undertaking to make this road, Metcalf was strongly opposed by a son of one of the commissioners; but Peter Leigh, Esq., of Lyme, and another gentleman, supporting Metcalf, he gained his point, and completed the contract, for which he received nearly eleven hundred pounds. Eight miles of road were advertised to be made between Huddersfield and Halifax. A meeting was held, and several persons attended with estimates. One part of the course was rocky and full of hollows, and the ground in very bad condition, particularly between Elland and Saltershebble, and through a place called Grimscar Wood. Many were of opinion that it was impossible to make a road over that ground. But by building up the hollows, and lowering the hills, Metcalf accomplished the work. And it is worthy of

remark, that he never undertook any road which he did not complete, although he contracted for many which persons who had their sight declined. He finished the road between Huddersfield and Halifax, with a great number of fence walls and drains, to the satisfaction of the surveyor and trustees, and received for the work two thousand seven hundred and eleven pounds. A little after this, a road was advertised to be made between Congleton and the Red Bull Inn, in Cheshire, about six miles in length; but the materials were three miles distant. A meeting for letting this road was held at a place called Audersley, which Metcalf attended, and being a stranger in that part he might not have succeeded had he not fortunately met with three gentlemen who knew him. They said to the trustees, "Gentlemen, you have only to agree with this man, and you may be assured of having your work well done." The road, however, was not let that day, the business being deferred until another meeting, to be held at Congleton, where Metcalf and others attended with estimates. "Gentlemen," said Metcalf, "I am a stranger to you, and you may with reason question my performing the bargain; but to prevent any doubt, I will first do one hundred pounds' worth of work, and afterwards be reasonably paid as it goes forward; the hundred pounds may lie in the treasurer's hands till the whole is completed, and then to be paid." On this proposal, and the three gentlemen's recommendation at the former meeting, they agreed with him, although there was an estimate given lower than his by two hundred pounds. He completed the road, to the great satisfaction of the surveyor and trustees, and received three thousand pounds.

In the summer of 1788 Metcalf lost his wife, in the 61st year of her age, after having been married thirty-nine years. She left four children, and her remains were interred in the churchyard at Stockport, Cheshire. The subject of this biographical sketch now returned to

his native county, and at the age of 77 busied himself in purchasing and selling hay and timber. During his latter years he resided with his daughter at Spofforth, near Wetherby, in the West Riding of Yorkshire, where he died in 1802, aged 85 years. When we reflect on the circumstances in the life of this remarkable man, we are forcibly struck with the following category of his acquirements:—He walked and rode, he swam, fished, played at cards and skittles, rode and betted on races, was an excellent performer on the hautboy and other instruments, was a very successful recruiting agent, and as a soldier was the life of the corps to which he belonged, in the bivouac or on the battle-field. He was a dealer in horses, fish, hay, wood, and woollen and cotton goods, and he also succeeded in evading the law in various contraband transactions. He established public conveyances in towns, and between places which had not before enjoyed such advantages, and succeeded in building houses and in making a great number of roads and bridges in the most satisfactory manner, in spite of strong competition from professional men, who enjoyed the advantages of perfect vision and long practical experience. Altogether, John Metcalf must ever stand out as the embodiment of strength of will, soundness of judgment, reckless disregard of danger, and extraordinary strength of physical constitution. Doubtless there is much in his career open to censure, but even his vices show what difficult things may be performed without sight, and how far the blind may contend with success against their more fortunate fellow-men.

Joseph Strong.

This clever mechanic was born in 1732, at Commersdale, near Carlisle, where his father owned a small piece of land. When four years old, he lost his sight from smallpox, but his natural vigour of mind and

body soon triumphed over this misfortune. He early exhibited great fondness for the mechanical arts, and evinced considerable musical talents. His first efforts at handicraft showed themselves in the production of rude musical instruments, such as a violin, a harp, a flute, and a hautboy, and these performances begot in him a strong desire to build an organ. An idea of the arrangement of the keys he obtained by examining a spinet, but he was at a loss how to construct the other parts. Determined, however, to gratify his thirst for knowledge, when about fifteen years old, being influenced by a preconceived plan, or impelled by a sudden impulse, he stayed in Carlisle Cathedral after the congregation had departed, and managed to get himself locked in. When he imagined all was safe, he made his way to the interior of the organ, and, having examined the pipes and everything immediately connected with them, he supplied the instrument with wind, and proceeded to the key-board to try the effect of the various stops. This, however, could not be done without producing sounds which penetrated beyond the church, and reached ears other than his own. It was then about midnight; the neighbourhood was alarmed; all the tales of the lovers of the supernatural were realized, and there were the veritable ghosts entertaining themselves with the organ. At length some persons bolder than the rest caused the cathedral doors to be opened, and there, to every one's amazement, was found the blind boy, Joseph Strong, calmly examining the organ, and caring nothing for the spirits of either world, nor for men either. The next day Strong was taken before the Dean, who questioned him as to his object in disturbing the neighbourhood; and having been satisfied on this head, he gently admonished him, and gave him permission to go to the organ whenever he wished, at seasonable hours.

Our mechanic now set to work with redoubled energy to carry out his favourite design, and soon completed a

small organ, which was the surprise of all who examined it. This done, he built a second, on which he played for the remainder of his life; and he also had the satisfaction of making a third instrument, which was purchased by a gentleman in the Isle of Man. In the construction of his later organs he was much assisted by information obtained from a gentleman belonging to the trade in London, which city Strong visited in company with his mother—they, it is said, walking the whole of the distance from Carlisle, about 300 miles. But what motive could have prompted them to journey in this fashion is not very clear, as the family seems to have been in easy circumstances. Strong used to make various articles of furniture and of wearing apparel, and the boots that he wore in his journey from Carlisle to London were the work of his own hands. While in the metropolis, our Cumberland youth was introduced by Dr. Brown to Stanley, the celebrated blind organist, who entertained so high an opinion of his abilities that he offered to give him lessons in music; but Strong, caring more for home ties than for the promise of a brilliant career, thankfully declined the generous offer. Among other pieces of machinery, our mechanic constructed a weaver's loom, by which he was enabled to manufacture plain cloth, plush, damask, etc. The first-named fabric produced him considerable profit, but the ornamental goods were only made for the sake of novelty. In estimating the value of the achievements of a life such as that now under review, it must be borne in mind that what was accomplished was the result of the efforts of one who never received any regular instruction, and who laboured under the privation most inimical to mechanical success. Doubtless, many of his works lacked the style and finish possessed by other similar articles, but, nevertheless, they strikingly showed what might have been effected by their maker, if he had enjoyed the advantage of suitable instruction.

Mr. Strong married at the age of twenty-five, and died at Carlisle in 1798, being in his sixty-sixth year, and leaving several children.

Thomas Wilson, the Blind Turner and Bell-ringer, of Dumfries.

The following account of this estimable man is extracted from the 'Mirror,' vol. v. 1825, page 273 :—

"Thomas Wilson was born on the 6th of May, 1750, old style, and had nearly completed his 75th year. Dr. Jenner's invention came too late for him; when a mere child he lost his eyesight by the natural smallpox, and had no recollection of ever having gazed on the external world. Like other boys, he was very fond of visiting the venerable mid-steeple of Dumfries, and at the age of twelve, was promoted to the office of chief ringer. Being of industrious habits, he, after much labour and perseverance, succeeded in gaining a pretty correct notion of the trade of a turner —such as, without becoming a burden to any one, enabled him to support himself—and honest Thomas's *beetles* and *spurtles* are still held in high repute by the *guid wives* of both town and country. Although the business requires a considerable number of tools, he had them so arranged that he could, without the least difficulty, take from his shelf the particular one he might be in want of, and even sharpen them when necessary. He excelled in the culinary art, cooking his victuals with the greatest nicety, and priding himself upon the architectural knowledge he displayed in erecting a good *ingle* or fire. In his domestic economy he neither had nor required an assistant. He fetched his own water, made his own bed, cooked his own victuals, planted and raised his own potatoes, and what is more strange still, cast his own peats; and was allowed by all to keep as clean a house as the most particular spinster in the town. Among a hun-

dred rows of potatoes he easily found his way to his own, and when turning peats, walked as fearlessly among the flags of Lochar moss, as those who have all their senses about them. At raising potatoes, or any other odd job, he was ever ready to bear a hand, and when a neighbour got groggy on a Saturday night, it was by no means an uncommon spectacle to see Tom conducting him home to his wife and children. As a mechanic he was more than ordinarily ingenious, and made a lathe with his own hands with which he was long in the habit of turning various articles both of ornament and general utility. In making cocks and pails for brewing, dishes, potato-beetles, tin-smiths' mallets, and hucksters' stands for all the country round, blind Tom was quite unrivalled; and many a time and oft, he has been seen purchasing a plank on the sands, raising it on his shoulder, though ten feet long, and carrying it home to his own house, without coming in contact with a single object. He also constructed a portable *break* for scutching lint, which he further mounted on a nice little carriage, and in this way, readily transported both himself and the machine to any farmhouse where his services were required. . . . Never was bell-man more faithful. For more than half a century Tom was at his post three times a day, at the very minute or moment required, whether the clock pointed right or no, and without, we believe, a single omission. In the coldest morning, or the darkest night of winter—foul or fair, sunshine or storm—it was all one to Tom; and though sluggards might excuse themselves on the score of the weather, his noisy clapper never failed to remind them that there was at least one man in the town up and at his duty; or to speak in the language of a good old proverb, that

> "'Early to bed and early to rise,
> Makes a man healthy, wealthy, and wise.'

Indeed, such was his punctuality, that he was never

known to commit a single mistake but one, by ringing the bell at eleven in place of ten at night.

"This occurred very lately, and when joked with on the subject, he remarked that he had surely become *fey*.

"A melancholy event attached to the death of this humble, but honest and really ingenious person. . . . The room in the belfry of the mid-steeple was the great scene of Tom's exploits, and he may be also said to have died at his post. On Saturday last, at ten o'clock at night, his hand touched the ropes for the last time, and, though many were astonished, both at the shortness and irregularity of the chime, all were as unconscious as the ringer himself, that he was engaged in tolling his own knell. But it was even so. Struck with something like an apoplectic fit, he staggered, as is supposed, against an old chest, cut his head slightly, sank on the floor, and remained all night in this forlorn and pitiable situation, without a friend to help him to a cup of cold water, or wipe away the damps of death that were fast gathering on his venerable brow. For some years past, a person had assisted him in ringing the bells on Sundays, and when this individual visited the steeple at seven o'clock in the morning, he had to force the inner door of the belfry before the state of the deceased could be ascertained. Though he still breathed, he was unable to speak, and was immediately carried to his own house in a state of utter insensibility. A surgeon was sent for, who attempted to bleed him without success, and though every other remedy was tried, he only survived till three o'clock of the same day.

"Thomas Wilson has left behind him an honest fame. As a man he was singularly benevolent and kind; as a Christian humble, cheerful, devout; regular in his attendance at public worship, and at religious societies for the diffusion of the gospel. Morning and evening he regularly performed his devotions in the steeple,

though he was careful to conceal this fact from his friends; and though above asking charity for himself, he was never ashamed to apply for others. Many a destitute creature in fact was more befriended by Blind Tom than by persons who had much more power, and at the periodical divisions of the poor's money his representations were always listened to with the greatest attention both by elders and ministers. Everybody knew that he was perfectly disinterested, and that, so far from appropriating anything to himself, he would rather have taxed his own very slender means. Though humble in station, his moral worth and integrity were high, and, independently of his age and services, a more deserving character never carried to the grave the regrets, we may say, of a whole community."

Due honour was done to the remains of Blind Tom; the corporation and upwards of three hundred respectable persons attended his funeral, and a subscription has been opened for erecting a suitable monument to his memory.

REMARKS ON INDUSTRIAL EMPLOYMENTS.

Knitting, Netting, etc.

The employment of knitting is perhaps the most widely diffused and the oldest of those carried on by the blind. We find that about the year 1550, Joan Wast, one of the four blind martyrs of England, maintained herself by knitting stockings, which occupation must have produced considerable profit before the invention of the stocking-weaving machine. The adoption of knitting by the blind at such an early date is the more remarkable, as it appears from Sellon White's History of Inventions, that the art had only just been introduced into England from the Continent.

It is believed that knitting is the only occupation

that is common to all the blind institutions of the world, and although it cannot now be said to be a profitable investment of time, yet its practice is attended with some advantages.

In the case of children it is a means of enabling them to acquire the use of their fingers, while for women it is a never-failing source of amusement attended with some profit.

The excellency reached at some blind schools in knitting, and its twin-sister crochet, is truly surprising; but the time employed to secure this excellence would be much better expended in imparting to the pupils the knowledge of an employment more likely to give them the means of providing for their own maintenance.

Knitters should wind a piece of thread several times round one end of each knitting pin, and tie it tightly at the distance from the point beyond which they do not wish the work to pass.

Fancy netting is often carried on by women, but seldom with profit.

Twine netting is sometimes done by females; but generally it is an occupation for men, and until the introduction of netting by machinery, which has thrown the trade chiefly into the hands of one firm at Musselburgh, near Edinburgh, the making of fishing and other nets by hand was a profitable employment, of which the blind often took advantage; and although it cannot now be classed among remunerative occupations, yet it is of some use, as many persons insist that hand-made nets are superior to those produced by machinery; very few blind schools, however, now pay any attention to the art.

Hair-work, bead-work, and the making of watch-guards and vase-stands are useful acquisitions, although not very profitable in a pecuniary sense.

Basket Making and Cane-work.

Few trades practised by the blind are as useful as basket making, for it deals with articles in general demand, both in country and town. It was introduced into the first blind school, namely, that of Paris, in 1784, and it has since been adopted by nearly all the European and American institutions. It is, however, a singular circumstance that while this trade is almost universally taught in establishments for the blind, it has been discontinued in the very institution which first introduced it, so that Paris now almost stands alone in the rejection of this handicraft. The finer kinds of baskets can be made by women, but no female has ever been known to maintain herself by this means, unless connected with the Association for Promoting the General Welfare of the Blind.

The writer undertook, in 1857, to ascertain the means by which the French were enabled to surpass the English in the production of fancy baskets. He visited France, and found, after much difficulty, that the articles imported into this country, and known by the name of French baskets, were made in the poorest rural districts in the winter season, and sold at astonishingly low prices to factors who have establishments in central French villages for receiving the baskets, and warehouses in London and other places for their sale. Persons of all ages and both sexes are employed in the manufacture, and the cottagers, in many instances, grow their own osiers. The tools used by the French are peculiar, the shave and upright being made so as to take off two thicknesses from the skein at the same time, and the cleaver has three divisions at one end and four at the other. The baskets are made on blocks which take to pieces, so as to be easily removed when the body of the basket is finished.

After making these discoveries some blind women were taught on the French plan with perfect success,

at the institution of the Association for Promoting the Welfare of the Blind, London, which success was shown by the circumstance of ordinary purchasers, who knew nothing as to the makers of the goods, selecting baskets made by the English blind women in preference to those manufactured by the sighted in France; and it is much to be regretted that circumstances have not permitted this plan to be fully developed, for it is almost certain that, under proper management, the blind women of this country could produce baskets which would compete successfully, both in quality and price, with those now imported from France and Germany.

The stronger kind of work, called rod-work, offers excellent employment for men, and possesses the advantage of being in constant demand. This trade, however, has some drawbacks of considerable importance, viz., it can only be successfully carried on by persons who have correct ideas of shape, and the necessity that exists for the workman being often in a stooping posture, and having his hands always kept damp, makes it very prejudicial to health, which renders basket-making only suitable for those who have peculiar abilities and robust constitutions.

Bottoming chairs with cane is a valuable addition to the trade of a basket-maker, and it is capable, under favourable circumstances, of being carried on advantageously as a separate employment. It is a profitable occupation for females, and was first introduced by the Association for Promoting the General Welfare of the Blind in 1857, in the establishments of which society it has since been in use as an employment for women. It has also been introduced into several other institutions. A basket-maker should also know how to bottom chairs with rushes, and to make bee-hives.

Sack, Mattress, and Bed-making.

These trades were first introduced by the Edinburgh

Asylum, and they are now carried on in five institutions in Great Britain and America. In some of these establishments, however, they only exist in name, and are considered almost useless. Where they succeed sighted labour is added to that of the blind, and the success at Edinburgh would seem to imply some special circumstance connected with the locality. Many branches of the above employments are extremely simple, and the needlework may be done by blind women. Much space is required for workrooms, and the dust from the feathers, hair, and flock are not conducive to health, the cleaning of beds from hospitals, which is often done, is a very questionable proceeding in the case of the blind, who, as a class, are more delicate than other persons, and therefore more liable to contagious diseases. Although these propositions are self-evident, we are not in a position to show that mattress and bed-makers are unhealthy, simply because there are no records to which reference can be made for information.

Mat and Matting-making.

The arts of mat and matting-making were first introduced at the Liverpool Asylum for the Blind about the year 1791, and they have since been adopted by many other institutions. They are handicrafts which are readily learnt, but there is no demand for them outside large towns, and even there the call for them is very small, which is due to the way in which mats are produced in prisons, and sold to the trade at very low prices. At St. Mary's Blind Asylum, Dublin, in 1865, the girls worked at making mats on boards under the direction of the nuns in charge of the establishment, but this employment is very ill-suited to females, as it requires considerable muscular strength.

Brush, Broom and Mop-making.

Of the various employments open to the blind none affords greater advantages than that of brush-making. The variety of articles within its operation gives scope at once to the strong and clever, and to the dull and weak. In fact, it may be said with truth, that if a person can be taught anything, he can be made to do something connected with the brush trade. This being so, it is no wonder that, although the employment has only been in use by the blind in this country for about fifteen years, it is now in operation at twenty-two institutions of the United Kingdom. Brush-making was introduced by the Association for Promoting the General Welfare of the Blind, London, in 1856, and it has been gradually developed, so that now every branch, even the most difficult, is carried on by that society.

Certain kinds of brushes were made some years before at Paris, and at Boston, America, sighted teachers doing the hard parts. It did not, however, exist as a trade for the blind until introduced by the association above named.

It has for some time ceased to be carried on at Paris and Boston, and it is matter of surprise that that which has succeeded so well in London with blind teachers should have failed in France and America with sighted instructors.

Dr. Howe, of Boston, when visiting England in 1867, was much struck with this circumstance, and it shows very strongly the advantage of having teachers who can fully appreciate the difficulties under which the blind pupils labour, and who can supply from their own experience the means of overcoming such difficulties.

Brush-drawing, *i.e.* inserting tufts of hair into holes, and fastening them with wire or string, affords employment for all classes of persons. The finer sorts, such

as tooth, hair, and clothes brushes, are done by women, and some kinds are suitable for persons of the smallest capacity.

The stronger descriptions of goods, such as scrubbing-brushes, stove-brushes, etc., give work to men, and afford scope for the exercise of the most varied abilities.

Brush-finishing is a branch requiring considerable skill; it is very profitable, but is only open to men.

Brush-boring, or drilling holes to receive tufts of hair, was long considered impracticable for the blind, even by those who recognized the suitability of the other branches of the trade, but it is now readily accomplished; it needs workmen of some skill, and is a profitable department.

Hair-broom making consists in fastening tufts of bristles in holes in a wooden stock by means of hot pitch; the pitch is heated by gas, for which suitable protection is provided. Learners employ a movable guide to keep their fingers from the pitch, but advanced workmen dispense altogether with its use. Only men are now employed at broom-making, but there is no reason why it should not be carried on by females of average intelligence.

The manufacture of carpet-brooms is suitable for strong men with some capacity, and the leather-work is done by women.

Mop-making is carried on by men, but it is quite open to women.

Firewood-making.

The making of firewood gives occupation to persons of both sexes, and it is particularly serviceable in affording an opening for surplus labour, being an article of general demand, even in localities where coal is abundant.

Firewood does not hang on hand for any length of time, for what is not sold in the summer is easily dis-

posed of in winter. Chopping may be done either by men or women, but it is more suitable for men.

In sawing wood it is best to use a machine that works a circular saw, as it cuts quite evenly, and requires only muscular strength to do the greater part of the work, which meets the case of those men who have moderate strength of body, but not much capacity. Feeding the saw, however, demands the exercise of some judgment on the part of the man so engaged. Tying the bundles is a profitable and healthful work for women, and it may be remarked that firewood-making owes its introduction for the use of the blind to the association before named.

Turning.

Fancy turning has been practised for some time at Paris, Lausanne, and a few other places, but the employment is more ornamental than useful. If it is ever to be of any good to the blind, it must be carried on very differently to the method hitherto pursued. To introduce turnery goods with profit, the blind worker must derive the same aid from steam-power as his sighted competitors. Nor does this seem impossible of attainment, as the writer, who is himself without sight, has used a lathe worked by steam, although he is not in any sense a member of the trade; and there can be little doubt that, if properly carried out, steam-power might be made available for the blind. It should, however, not be forgotten that great care must be taken in its introduction to adopt such special means as may be required under the peculiar circumstances of the case; the problem being to enable a person without sight to work safely with so potent an agent as steam.

Carpentry and Cabinet-work.

These trades are capable of being made very ser-

viceable to persons without sight. The large and widely-spread demand for articles connected with them, and the ability displayed in their prosecution by individual blind persons, unaided by regular instruction, conclusively point out these employments as deserving of a well-organized effort to make them available as recognized industries for the blind.

It is somewhat remarkable that there is now existing in the museum at Munich a pepper mill, the whole of which, including the cog-wheels, was cut out with a common knife, by a blind man, as early as the year 1602. From that time to the present various isolated cases have occurred, in which great excellence has been reached in wood-work by persons without sight. About the middle of the sixteenth century a native of Belgium, named Martin Castelein, obtained some notoriety as a blind carpenter and turner; his father instructed him in these arts with such success that the Prince of Orange became the patron of the sightless workman. Castelein, among other articles, made an organ with wooden pipes. He carried on business at Anvers (*i. e.* Antwerp), where he died towards the end of the sixteenth century.

At the commencement of the present century, John Kay, of Glasgow, worked constantly as a cabinet-maker, having received some instruction from his brothers. He finished his work in a very satisfactory manner, and was usually occupied in producing various articles of furniture, which fetched good prices on account of their excellence, and not from any fictitious value set on them from the circumstances connected with their maker.

T. Wilkinson, of Louth, was often engaged by various persons in making window shutters, and in doing sundry household repairs. There is at the present time, we believe, in the museum of Copenhagen, a superb sideboard of ivory and ebony, made many years ago by a blind Norwegian; and the writer

has in his possession a large book-case, made by Mr. Farrow, Teacher of the Association for Promoting the General Welfare of the Blind, London, the style and finish of which would do credit to any artist. Several experienced cabinetmakers have examined this book-case, and confessed that they were unable to discover anything which would lead them to believe that it had not been made by a finished tradesman with all his faculties. Some attention has been paid to this subject by the Association for Promoting the General Welfare of the Blind, and persons have been taught to make various articles of domestic use, such as soap-boxes, housemaids' boxes, clothes boxes, knife-boards, etc. But owing to the necessity that has existed for the Association to keep its efforts within its means, any great development of trades connected with wood-work has been impossible. It is, however, satisfactory to find that the articles made were as well executed as those produced by sighted workmen. To the trades of the carpenter and the cabinet-maker might also be added those of the trunk-maker and the packing-case maker, which might be carried on with considerable success under proper management. Neither does the cooper's art exclusively belong to the sighted, and we hope to see the day when as good tubs and pails will issue from the workshops of the blind as could be desired by the most fastidious housekeeper.

Trades connected with Leather.

From time to time various efforts have been made to render shoemaking a profitable trade for the blind, and although failure has uniformly attended such efforts, yet it has arisen from those having the charge of the undertaking not having understood the peculiar difficulties with which sightless operatives have to contend, and also from their not having the power to invent special appliances to enable their sightless pupils to

overcome such difficulties. Institutions at Liverpool, London, and Philadelphia have severally failed in this respect, but their failure should only be used as a warning, and should not be taken as a reason for abandoning a trade which possesses many advantages. The manufacture of shoes by machinery has very much changed the mode of carrying on the business; but we believe that there is nothing in the altered circumstances of the case to which the blind, under proper training, could not accommodate themselves.

Saddle and Harness making,

too, might be well carried on by persons without sight; in fact, that trade is free from many difficulties to which shoemaking is liable. But in all cases it should be borne in mind that the conditions of success are sufficient capital, a teacher who knows how to work without sight, tools and appliances suited to the wants of the blind, liberal wages to the workpeople, and a market for the manufactures.

Leather Bags and Dressing-cases

might also be made with profit; and whatever articles are composed of leather might be manufactured by the blind.

Corkcutting.

The writer has long held the opinion that corkcutting could be practised without sight, and this view is confirmed by the circumstance that the best operatives, especially in Spain, never look at their work. Something in this direction has already been accomplished by the making of cork fenders, for the use of ships, by the inmates of the Liverpool workshops for the out-door blind; and we are persuaded that, if properly developed, every branch of the corkcutter's

trade could be successfully carried on without sight. A cork-cutting machine was exhibited at the International Exhibition of 1862, which the writer tried with perfect success. It was an American invention, and turned out an extraordinary number of corks per day. It was not intended specially for the blind, but could be used by them as well and as quickly as by other persons.

Pottery.

The manufactures of bricks and tobacco-pipes have been proved by experiment to be quite practicable for the blind; but how far these arts could be made to pay has yet to be determined.

There does not, however, appear any good reason why they should not prove remunerative; and it may be added that there are many branches of the potter's art that might be carried on without sight.

The Making of Sash-line, Rope, and Twine.

Sash-line making has long been carried on in several places, but the difficulty of getting sale for the product, and the small wages made when work is obtained, entitle it to be considered rather as an amusement than as a trade.

Twine-spinning and rope-making have been tried at Liverpool, Glasgow, and Copenhagen, without much success, but we think that this springs from the want of special appliances suited to the necessities of the blind. The largeness of the space required to conduct these operations appears to be the principal difficulty, but of late several machines for the sighted have been invented, especially in America, which quite obviate this defect.

Wire-work.

Wire-work can be done without sight, and its development would be found particularly advantageous.

Articles such as fire-guards, meat-stands, blinds, sieves, bird-cages, and fencing, etc., could be made of the material. The use of wire fences is very common in some rural districts, particularly in North Wales, where the fields are usually divided by this means.

Repairing Watches and Clocks.

A blind man in the neighbourhood of Camden Town, London, was for many years remarkable as a repairer of clocks and watches, and another, at Great Missenden, Bucks, carried on the same business. About fifty years ago, a gentleman passing through the town of Barnstaple, North Devon, observed a sign over a door denoting that clocks, watches, etc., were repaired by William Huntly, a blind man. On making inquiries, he was informed that the person in question was born blind, or at least, that he had no recollection of ever having been able to see. He was trained to his occupation by his father, who was a watch and clock maker, and after his parents' death, he followed the business with great success, being considered by the inhabitants very superior in his profession. He repaired musical clocks and watches without difficulty, and our authority adds that it often happened that when others had failed in completely repairing a watch or clock, Huntly succeeded in discovering and remedying the defect.

Without being prepared to assert that watchmaking should be classed as one of the employments well suited for the blind, we nevertheless think that whenever any one shows a decided predilection for that trade everything should be done to enable him to carry out his wishes.

Employments connected with Agriculture.

What is there in the nature of agriculture that

should render it unfit to be practised by the blind? The diversities of plants, their state as to development, and the different kinds of soil, are all cognizable by the touch, and yet it seems to have been taken for granted that the blind, and the various arts connected with farming, are separated by an impassable gulf. More than half the number of those deprived of sight are natives of rural districts, and no permanent benefit will ever be done to these persons, unless it be effected in a way calculated to meet the wants of their condition. An agricultural labourer becomes blind, say at the age of thirty, what is required to be done for him? Should he be sent a hundred miles away from his home, to be put to learn a trade for which he is not in any way suited? His hands are clumsy, and when he could see he had not by any means the dexterity in using his fingers which belongs to the denizens of towns. Basket-making, it is true, is suited to the wants of rural districts, but comparatively very few have the power of learning this trade, on account of the difficulty of making the baskets shapable. What, then, is at present done for our blind peasantry? We answer, next to nothing, in comparison to what they need, and to what is done for their brethren of the towns. The state of idleness, however, in which they are sunk, is not an inherent necessity of their condition, but it simply results from the little attention that has been paid to the subject. About twenty years ago, the writer induced some half-dozen blind youths to turn amateur gardeners; the necessary tools were procured, each person had his small piece of ground allotted to him, and the parties set to work in healthful rivalry to see who should produce the finest crops. The ground was none of the best, and the young beginners had no efficient instructor, but in spite of these drawbacks, very good crops were produced, and rival specimens soon appeared of mustard and cress, lettuce, onions, radishes, etc.

The blind son of a labourer, having obtained one of the allotments of garden ground made by a kind-hearted landowner to the working people of the district, was remarkable for getting as much profit out of his garden plot as the most successful of his neighbours, without devoting any more time to its cultivation; and there is now, in the neighbourhood of London, a vegetable and flower garden cultivated entirely by a person without sight, which will compare very favourably with any piece of ground in the locality, cultivated though it be by a professional gardener.

Instances have occurred in which the rearing of poultry, the breeding of pigs, and the keeping of cows, have been made profitable by individual blind persons. We are persuaded that, if a well-organized system of farming were set on foot, adapted to the circumstances of persons without sight, the success of the undertaking would soon be apparent. And here it may be mentioned that the most successful agriculturist, as well as the most clever artisan, ever known by the writer, is Mr. Farrow, teacher at the Institution of the Association for Promoting the General Welfare of the Blind, London.

The direction, we think, an experiment in farming should first take, is that of a dairy farm. Butter and cheese might be made, eggs and poultry produced, and pigs bred for market. The author has himself reaped and mowed, a very little it is true, but still enough to show that blindness is not an insuperable impediment in the case. The use of the sickle is much better for the blind than the scythe, as the reaper has the free use of the left hand to regulate his movements. The husbandman without sight would be much aided by the use of a stout rope with a peg at each end, which could be thrust into the ground, and removed from time to time to enable the operator to dig or plant in straight lines. Spade husbandry, as commonly used in Belgium, with steel implements, would be better for

the blind, as it would dispense with the use of the plough, etc.; and as the Belgian mode is considered by many eminent authorities to be superior to that of the English, no pecuniary loss would be experienced by its adoption. In the life of John Metcalfe, contained in this volume, it may be seen how successful a blind man may become in the management of horses, and we will only add here a few remarks bearing on the same subject.

A gentleman in the North of England, a few years ago, was kind enough to engage as his ostler a poor man, who, although totally blind, gave great satisfaction in the discharge of his duties. He could tell the age, the state of the eyes, wind, or legs of any horse.

There was also a gentleman of Harrow Weald, who entrusted the care of his horse to a person without sight, and the writer heard an anecdote from a trustworthy source, of a farmer, who, having received the promise of the loan of a horse, sent a blind man, whom he employed in odd jobs, a distance of three miles to fetch the animal. On returning, the farmer remonstrated on account of the length of time he had been gone, when the poor man replied, "Well, sir, I don't know whether it is me or the horse, but I never found a brute so hard to get along in my life." On examination, it was found that the horse was blind, so that a blind man had actually been driving a blind horse; no wonder that it was found a difficult task. Before finally quitting the subject of agriculture, it may be remarked, that many of the advances recently made in that science, such as the improvement of the various soils by chemical means, may eventually prove very beneficial to the blind, as a knowledge of agricultural chemistry requires a development of the mental powers, in which the blind, as a class, are certainly not inferior to their sighted brethren.

REMARKS ON THE PECULIAR POSITION OF BLIND WOMEN.

In taking into consideration the position of blind females, it is necessary to bear in mind that the marriage state is a normal condition of human happiness.

In the case of men without sight, this almost indispensable requisite is not exceptionally wanting, for they certainly enter into the bonds of matrimony quite as frequently, in proportion to their numbers, as their sighted neighbours; but with blind women it is far otherwise, and as single life generally involves the necessity of their providing for their own maintenance, it is evident that the position of females suffering from blindness must be bad in the extreme. Want of muscular strength prevents their following many employments open to men. Generally, they have to endure a state of wretched dependence on poor relatives, who have barely sufficient of the necessaries of life to provide for their own daily wants, or they have to seek shelter in a workhouse, where companionship with the vile and debased makes life so insupportable that the prayer of many and many a poor blind creature has nightly been that she might not live till the morning. Yes, reader! this picture is not coloured, for the writer has known many such cases. What, then, is the problem before us? It is simply this: What can be done to remedy the exceedingly heavy sufferings that now press so grievously upon the greater number of blind females? Woman without the aid of man is naturally weak, and how incomparably so must they be who are not only debarred from having man's aid, but are also deprived of the inestimable blessing of sight! Weak in body, fearful in mind, utterly without friends and pecuniary resources, and their condition almost rendered hopeless by that greatest of all afflictions, blindness, the position of the greater number of our poor sightless sisters is indeed exceedingly wretched. What,

then, can be done to help these children of misfortune? Let us see. That which blind women specially need is *a home*—a happy home, where their joys and sorrows will be dear to some one; and is it impossible to give them this? Certainly not! and let those who imagine it is think well over these words of Christ, viz. "Whatsoever ye would that men should do to you do ye even so to them, for *this is the law and the prophets*," and "Inasmuch as ye did it not unto one of the least of these my brethren, ye did it not to me."

Various institutions have at different times been opened in this and other countries for the reception of females without sight, but these establishments for the most part are for educational purposes, into which persons are received for a few years, and are then dismissed without resources, to get through the world as best they may. There are, however, a few asylums for women in which the inmates are kept during their lives, and these establishments certainly confer greater happiness on those committed to their charge than could be found in a workhouse. The absence, however, of the family tie or anything approaching to it, the want of the free exercise of religious conviction, and enforced restraint, often very injudiciously administered, prevent asylums from fully meeting the wants of the class of persons for whom they are intended, and accordingly instances are not rare in which women have left an institution that had sheltered them for years, and braved the evils of abject poverty, rather than be deprived of the exercise of those personal rights so dear to every human being. The plan adopted in this matter by the Association for Promoting the General Welfare of the Blind, London, is to allow the women connected with the society to live where they please with their relatives, if they have any, and if not with any one else they may choose, and to permit them to attend any place of worship they may desire, the Association only reserving to itself the right of interfe-

rence whenever it is shown to the satisfaction of the committee that any one is living in a disreputable house. The amount of good effected by this means is beyond appreciation, for none but Him who knows the secret springs of happiness in the human heart can estimate the joy experienced by those who have an object in life for which to live, and who have some place, however humble, that they can really call their own home, and over which they reign supreme, even though it may only occupy the space of a few square feet. How the Association before named affords instruction, gives work, and grants pensions to the blind, according to their circumstances, is so fully detailed in another part of this book, that any further notice of it here would be superfluous, and we therefore proceed to remark that the means of obtaining a subsistence open to blind women are few and unremunerative, and that, as a general rule, their earnings have to be supplemented by charity, even to a greater extent than in the case of men. The employments carried on by females are brush-drawing, fine basket-work, repairing chairs, tying firewood, making sash-line, knitting, netting, crochet, needlework by hand and by machine; and for remarks on these and other similar occupations the reader is referred to the part of this volume which treats specially of industrial employments.

Some years ago many blind women obtained a respectable livelihood as organists and teachers of the pianoforte; but since the growth of the prejudice against female organists in general and all blind musicians, a woman who has the misfortune to be deprived of sight has scarcely the shadow of a chance, whatever her talents may be, of obtaining a subsistence by the musical profession.

The training of young girls in domestic pursuits is a matter of the greatest importance. Home is the true sphere of woman, and she who can produce do-

mestic comfort possesses the surest passport to the affections of a household. To the attainment of this most desirable object, blindness does not present an insuperable barrier. Many women without sight have proved skilful housewives, and in the matters of plain cooking, cleaning, washing, repairing clothes, and in doing the thousand and one things which go to make up the perfection of domestic happiness, they have shown themselves the equals and in many cases the superiors of their sighted neighbours.

It is a fact worthy of the widest circulation that the eminent Dr. Johnson entrusted the entire management of his domestic affairs to a blind person, namely, Miss Williams, the poetess. This lady, the daughter of an ingenious Welsh physician, and a woman of more than ordinary talent, having come to London in the hope of being cured of cataract which affected both eyes, and which ended in total blindness, was kindly received as a constant visitor at the doctor's house while Mrs. Johnson lived, and after her death Miss Williams, having taken up her temporary abode with Johnson, in order that an operation might be performed for the recovery of sight, eventually became a permanent resident with him whenever he had a house; and it may be mentioned that Miss Williams often remarked, when astonishment was expressed at her domestic performances, that "Persons who could not do those common offices without sight, did but little when they enjoyed that blessing."

There have been many blind women remarkable as clever housewives besides Miss Williams, and some have even obtained a reputation as good nurses. One of the most successful of the latter class was Martha Brass, of Liverpool, who, in addition to possessing great abilities as a nurse, was remarkable for her success as a shampooer. She was born at Richmond, Yorkshire, and was for thirteen years in the Liverpool Blind Asylum. On leaving that institution and find-

ing she could not obtain a living by any art acquired there, she struck out a new path for herself by the adoption of the professions of a nurse and shampooer. In this undertaking she had the good fortune to obtain the patronage of Lord Derby (grandfather of the present earl), who having employed her as shampooer for upwards of twelve years, settled upon her an annuity which she enjoyed until her death. It is recorded that Martha used to sit up with patients at night and give them their medicine, and that when an article was required from any part of the house she obtained it herself without difficulty. She died in 1868, aged seventy-one, leaving £2000, saved from her earnings and the benefactions of her patrons. Although Martha succeeded in amassing so large a sum she was no miser, as memoranda left by her show that during her life various sums, amounting to £900, were given away in charity. She was never married, but had several offers which she pertinaciously refused. She left by will the following legacies:—The Blind Asylum, £250; the Orphan Boys' Asylum, the Female Orphan Asylum, the Infant School, the Workshops for the Out-door Blind, the Deaf and Dumb Asylum, the Society for the Prevention of Cruelty to Animals, the Northern Hospital and the Southern Hospital, each £10. All these charities are in Liverpool. She also left £20 to the School for the Blind, York.

It is much to be wished that the various institutions that undertake the training of blind females should give to their pupils useful instruction in household matters; but in doing this care should be taken to procure the services of instructors above the standard of ordinary servants. It is also greatly to be desired that a small work should be printed in relief, giving practical hints and suggestions respecting cooking and general domestic economy. No fears need be entertained regarding the blind being allowed to light fires, as hundreds of persons have constantly done so

without having produced a single accident, although in many of the cases no sighted person resided on the premises.

The blind know when water boils by its making a softer and more mellow noise than it does before reaching the boiling-point. When pouring hot water into a cup or other vessel, the extent to which the vessel is filled may be told by pressing the left hand against its outside during the time that the process of pouring is going on.

Some persons, by dint of long practice, can thread needles of moderate size without any assistance than that of their fingers, and others call in the aid of their tongue and teeth. A very simple mode, however, and one which requires little practice, is to take a piece of fine wire, and having put one end through the eye of a needle, pass the other also through the eye so that the two ends may lie together, and having drawn the needle for a few inches along the double wire, pass the thread through the loop of the wire, then, pressing the loop tightly with the thumb and forefinger of the right hand, draw the wire and the thread through the eye of the needle as may be desired. On commencing the operation, the needle should be held in the left hand and the wire in the right, the wire should be as thin as fine silk, and it may be remarked that the plan is available alike for common needles and for those used in sewing machines. Special needles for the blind have been introduced, with a small slit at the side, to allow of the thread being pressed into the eye; but they catch so much in the work, and the eyes break so frequently, that they are of very little use, and therefore a common needle, threaded with wire as above described, is what we recommend to the blind who would avoid unnecessary trouble.

ON THE INSTRUCTORS OF THE BLIND.

If we wish anything performed, they to whom it is

entrusted should possess the necessary qualifications if we would have it done well, and it is a statement incapable of disproof, that he who knows not how to do anything himself cannot teach another to do it. From this it follows that those who are unable to work without the aid of sight cannot teach others to do so. How then it may be asked do sighted instructors teach the blind? They do not teach them at all, in the true sense of the word; they merely bring them in contact with the work, and let them teach themselves, if they have capacity enough, and if not they go untaught, and it is in this way that the largeness of the number of pupils who are supposed to be incapable may be accounted for. In the larger institutions for the blind this evil is somewhat lessened by the aid which the advanced pupils give to the novices; but in the smaller establishments the evils connected with sighted teachers are particularly apparent, and thus we generally find that the best workmen come from large institutions. Of course we do not mean to say that no sighted man can become an efficient instructor of persons without sight, for we have known several who have been equal to the most talented blind teachers; but this has been after they had passed through many years of daily experience with the sightless, and had, from having their hearts in the work, so accustomed themselves to the use of the sense of touch, that they had ceased to depend on their sight. The ordinary sighted teacher may be painstaking and possessed of every virtue, but still he does everything by the aid of the eye. Take sight from him and he is helpless, he can do nothing. The blind man, on the contrary, does everything by the sense of touch, and he who cannot teach him to use that sense aright is not the instructor he requires. Undoubtedly the sighted man can exhibit to his blind pupils the beautiful work he can do, and can show them how quickly he can perform it; but this does not instruct them in

the way to use their fingers, so as to produce that without sight which is accomplished by the teacher by the aid of sight.

When it was determined, in 1855, in connection with the Institution in the Euston Road, London, to endeavour to introduce brushmaking for the blind, experienced tradesmen were consulted, who all gave it as their opinion that the thing was impossible. When, however, without any professional assistance, drawing, *i.e.*, inserting the hair, was accomplished, they admitted that that could be done, but said the finishing could not. When the finishing was achieved they said the boring was impracticable, and when that was conquered they simply held their tongues. This incident is only a fair sample of what takes place on the attempted introduction of a new art for the blind, for the sighted man, without many years' experience, can never be brought really to believe that that can be done as well without sight which he finds it so difficult to do with it. We know there have been many inefficient blind teachers, but this has in great part arisen from their not having received proper instruction in the art of teaching. Very frequently, however, they have been considered inefficient without sufficient cause. The necessity that often exists in small institutions for the person employed as teacher to be also a kind of shopman and general factotum militates very much against the blind, and wherever the plan is adopted renders proper instruction impossible. The amount of prejudice that may exist against the blind, even with the managers of those institutions which are supported for the purpose of improving the condition of the sightless, is strongly shown by the following facts:—

The committee of a society that shall be nameless, having a blind teacher, with whose conduct they were not pleased, dismissed him. They then engaged a sighted man, but he was also soon discharged, and, when speaking of these occurrences in their annual

report, the committee informed the supporters of the institution that they had dismissed one teacher on account of incapacity, occasioned by want of sight, and had discharged another who could see, as he did not suit. Now, as the committee stated that they had dismissed one for being blind, why did they not also say that they had discharged the other for being able to see? But if this would have made them look too ridiculous, why did they not simply record that having found one of the teachers incapable, they had engaged another, and as he too was found not to give satisfaction, he had also been dismissed?

Some years ago the writer happened to visit a blind asylum where some ill-feeling existed between the superintendent, who could see, and his pupils, and the ill-feeling was in no way lessened by the superintendent making no secret of his belief that sight was necessary to enable any one to become a good instructor of the blind. Both parties appealed to the writer, who had the pleasure of inducing them to agree to the proposition that efficiency was the only standard in the case, and that this efficiency was more likely to be found with those who understood the wants of the blind from personal experience, than with those who had always enjoyed the free use of their eyes. Before quitting this subject, we cannot forbear remarking on the great necessity which exists for the establishment of a normal school, in which all who aspire to the position of instructors of the blind might receive a suitable training. Such an institution should be open both to the blind and to the sighted, and should embrace the study of everything connected with the welfare of persons without sight.

At present the instructors of the blind receive no special training, and it is surely a matter worthy of the attention of the imperial legislature, to see that the education and general welfare of so large and heavily-afflicted a class as that of the blind should not be left to the management of the incapable.

THE BLIND OF VARIOUS COUNTRIES.

EUROPE.

Russia.

As no census is taken of the blind in Russia, their total number, and the ratio they bear to the general population, cannot be accurately ascertained. It has, however, been estimated by statisticians of eminence, that the average number of the blind in countries possessing the same general characteristics as the Russian empire is one in every eight hundred of the population; and as the inhabitants of Russia in Europe exceed sixty-four millions, the blind cannot be fewer than eighty thousand. To meet the wants, and alleviate the privations of this large number of sightless ones, next to nothing has been done by the paternal government of the autocrat of All the Russias, and as the union of individuals for the promotion of schemes of benevolence is almost unknown, the state of the eighty thousand blind Muscovites must be pitiable in the extreme.

In 1806 the Emperor Paul, having entered into a close alliance with Napoleon, and declared war against England, wished to imitate the French in every possible way; and among the numerous things introduced into Russia from "La Belle France," was a school for the instruction of the blind, which was established at St. Petersburg by Valentine Haüy in the year above named. Haüy, when he accepted the imperial invitation, took with him one of his blind pupils, named Faurnier, who married, and spent the remainder of his life at St. Petersburg.

In 1825 an institution was founded at Warsaw. One has also been established at Helsingfors, the capital of Finland, and at Gatchina, a small town about thirty miles from St. Petersburg. We believe that there is also an establishment at Riga.

When Holman, the blind traveller, visited St. Petersburg in 1822, he found the Blind Institution of that city in a most flourishing condition. Reading by touch was practised extensively, and the inmates were enabled to print their own books. Music was cultivated to a considerable degree, and the pupils were largely engaged in manufacturing baskets, mats, and ropes. Holman says that he "left the place highly gratified and deeply impressed with the benevolence of the Emperor, under whose especial patronage it was conducted."

It is much to be regretted that we have no later accounts of any Russian establishment for the blind, but the general advancement that has of late years taken place in the empire of everything which tends to ameliorate the condition of the humbler classes warrants the assumption that at least the Institution for the Blind at St. Petersburg has not retrograded.

Sweden and Norway.

These countries, although united under one monarch, and possessing similar characteristics with regard to race, soil, climate, language, and social habits, yet with respect to the proportion which the number of the blind bears to the general population, differ as widely as any two parts of the world well can, for whereas in Sweden the blind are as 1 in every 1419 of the inhabitants, in Norway the ratio is as great as 1 in 540. This wide difference affords matter for very interesting inquiries for ethnologists, and its solution may some day produce important results. The number of the blind in Sweden is 2,536 in a population of 3,641,011, whereas Norway, with only a population of 1,490,047, has no fewer than 2,759 persons without sight, which is a relative proportion of nearly three blind persons in Norway to one in Sweden. There is a school for the blind in Sweden, which was established at Stockholm

in 1806, in which books embossed in the Roman type are used, and where a modification of Moon's type is also employed, the books being printed on that mode at the institution. The pupils also use a Swedish invention for embossing in Roman type by hand, an apparatus for pencil writing, and an arithmetical board with common figures, but none of these contrivances possess special merit. We believe the principal trades carried on are those of basket-making and knitting.

At Christiania (the capital of Norway) an institution has been founded during the last few years, but we are not aware that it possesses any feature of interest.

Denmark.

According to a census taken before the separation of the German Duchies from Denmark, it was found that there was one blind person in every 1,523 of the population, and taking the Danish kingdom as now only comprehending the peninsula of Jutland, and the adjacent islands, and assuming the population to be about 1,800,000, the number of the blind in the country cannot be less than 1,200. In 1811, a school for the blind was established at Copenhagen, by a body of persons called the Society of the Chain, which organization seems to resemble very much that of the Freemasons. The institution continued under the management of this society until 1857, when it received State patronage, was reorganized, and named the Royal Institution for the Blind, placed under the able management of Her Moldenhaver, and had a sum allowed it from the Royal Treasury of two thousand dollars per annum. When the institution was transferred to the State, the Society of the Chain endowed it with eight thousand dollars, by which it obtained the privilege of constantly having the power of nominating two directors out of the five, to whom the management of the charity was committed. The Society of the Chain, however, still

seems to have had a small charity for the blind under their own management, which, in 1864, extended assistance to thirteen old men and four children, and the Royal Institution for the Instruction of Children had at the same date about sixty inmates. In 1862, an Association for Promoting the Industrial Welfare of the Blind was founded at Copenhagen, somewhat on the plan of the London Association, and two years later it had thirty blind persons connected with it. At the Royal Institution, both sexes are admitted, and the common alphabet is employed for reading, the Danish and Norwegian Bible Societies having contributed toward the embossing of some of the books of the Holy Scriptures. They have at Copenhagen a very efficient mode of pencil writing, which is an improvement on Gall's Typhlograph, and also a useful contrivance for embossing the common letters by hand, but the expense and weight of the latter invention interfere greatly with its usefulness. We believe that basket-making is the principal handicraft carried on, and that rope-making, shoe-making, brush-making, and knitting are also taught, and it is to be observed that music is cultivated to a considerable extent. In Denmark, blindness very frequently results from scrofula, produced, it is said, by the use of impure virus in the vaccination of children.

Before quitting this subject, we may remark that in Iceland (which is a dependency of Denmark) there is the large proportion of one blind person to every 292 of the inhabitants. This high ratio is almost unprecedented, but the island being on the Arctic circle fully accounts for the circumstance, as the reflection of the moon upon snow is very prejudicial to sight.

The German Empire.

The ratio which the number of the blind bears to the general population of this extensive country varies

considerably in the different states, for while in Bavaria it is 1 in 1986, in Hesse Darmstadt it is as great as 1 in 1231; taking, however, as a general average, that it is 1 in 1600, and accepting the population of the empire as 43,000,000, we find that the total number of the blind is about 27,000.

The first institution for the blind in Germany was commenced at Berlin by Valentine Haüy, in 1806, when Herr Zeune, the celebrated inventor of relief maps and globes, was appointed director.

The example of Berlin was followed by Dresden, 1809; Königsberg, 1818; Breslau, 1819; Ymund, 1823; Munich, 1825; Weimar, 1825; Bruchsal, 1826; Friesenberg, 1828; Brunswick, 1829; Hamburg, 1830; Halle, 1832; Mannheim, 1846; Stettin, 1851; Magdeburg, 1853; Posen, 1853; Wolstein, 1853; Wurzburg, 1853; Mecklenburg-Schwerin, 1856; Illzach, near Mulhausen, 1856; Wiesbaden, 1861. There are also institutions at Düen, Ellwanger, Frankfort, Freiberg, Freidberg-Hesse, Hanover, Harbertusberg, Kiel, Leipzig, Metz, Nuremberg, Soest, and Stuttgart.

In these thirty-three institutions the mode of reading adopted, almost without a single exception, is that of the common Roman alphabet, although at Berlin, Hanover, etc. other systems are tolerated.

The Bible Society of Stuttgart has contributed largely to the production of the embossed German Bible, the greater part of which was printed at the Institution for the Blind at Illzach, near Mulhausen or Mulhouse, and which owes its completion chiefly to the labours of M. Koechlin, the blind director, and founder of the Illzach Institution; in connection with this matter it may be stated that the distribution of the embossed German Bible was greatly aided by a large donation from a philanthropic Russian. The apparatus for writing and performing the operations of arithmetic, etc. and the maps, are similar to those described in

this volume under their respective heads. The cultivation of music is also another characteristic common to the German institutions. In all of them the euphonious art is practised, and in the majority it is cultivated as a means of livelihood. The industrial employments of basket-making for males, and knitting for females, are universally adopted. The making of list shoes and straw mats, and the re-seating of chairs with cane and rush, are also very common; and we believe that brush-making is practised at Dresden and Kiel, the lathe for the work at the latter place having been procured from the Association for Promoting the General Welfare of the Blind, London. Rope-making is carried on at Hanover, and the art of turning at Munich. In the case of nearly all the foregoing establishments, their support is derived from the government of the kingdom or principality in which they are located. Sometimes, indeed, the aid given by the State is supplemented by private benevolence; but, as a rule, the blind institutions of the German empire are supported by, and are under the management of, the different local governments. The schools are open to all, irrespective of creed; but it is very much to be feared that this toleration results not so much from the exercise of true Christian charity, as from the spirit of *laisser faire*, to call it by no harsher name, which has been so rife in Germany and England of late. A few years ago there were at the Berlin Institution not more than forty pupils of both sexes, while at Hanover, the number was seventy, at Dresden ninety, at Hamburg eighty, and at Breslau sixty.

In Germany the blind institutions generally include both males and females, who occupy opposite wings of the same building, whereas in France, Belgium, and other Catholic countries, the two sexes inhabit premises at different parts of the city; and sometimes they are situated in different towns. It must, however, be remarked, that at L'Institution des Aveugles, Paris,

the boys and girls are located in adjoining premises.

The German institutions are remarkable for the favour shown to blind officials. The establishment of Breslau was founded and managed for nearly half a century by the celebrated Knie. At Hamburg they had also a blind director for many years, and the founder and present director of the institution at Kiel, Herr Simonon, is also without sight.

At Dresden, some years ago, the excellent director, Dr. Georgi, collected a sum of six thousand pounds, the interest of which was applied for the benefit of the pupils on their quitting the institution. Dr. Georgi lent or gave them sums of money for the purchase of tools and materials, and it is said that the sums lent were always duly repaid. He received work from some of those who lived at a distance from the institution, and remitted the money to them when the articles were sold; and it is greatly to the credit of the directors of the Saxon railways that they allowed the officials of the institution, and all blind persons, materials, and manufactured goods connected therewith, to travel free of charge.

The interest taken by the King of Saxony in the welfare of the blind is truly remarkable, for it is stated on credible authority that his Majesty used constantly to read the written journals presented by the officials to the managers of the Dresden Institution, and made marginal notes with his own hand, expressing his views on the subjects before him. This sympathy and concord between the king and the people are the more striking, as the present Royal family of Saxony are members of the Romish Church, while the great mass of the people are Lutherans.

At Berlin some attempts have been made to give employment to the blind in workshops, but without much success; and it may be also mentioned that materials are sold, and sums of money lent to the

pupils who leave the Breslau Institution, and that the establishment at Hamburg is remarkable for the excellence of the gymnastic training given to the pupils. We believe that there are four institutions for the blind at Berlin of various kinds, but that all of them are on a very small scale.

A few years ago a periodical was issued in black print at Hesse Cassel, exclusively devoted to subjects connected with the blind and the deaf and dumb which we believe still exists.

The Austrian Empire.

It is a matter of surprise that the government of so important a country as Austria should not have thought it worth while to have a census taken of the number of the blind, and other similar classes in its dominions. If, however, we consider the proportion which the number of those deprived of sight bears to the general population in countries occupying the same degrees of latitude as the Austrian territories, and if we bear in mind the ratio of the blind in the neighbouring States, we are led to infer that the proportion in Austria is about one in every one thousand of the people; and as the total population of the various countries now owning allegiance to the House of Hapsburg is about 33,000,000, the number of the blind in the empire cannot be less than 33,000. The first institution for the blind in the Austrian dominions was commenced by Dr. Klein, at Vienna, in 1804.

In 1807 a similar establishment was founded at Prague, in Bohemia, and in 1825 one was opened at Pesth, in Hungary. There are also similar schools at Lintz, in upper Austria, and Brunn, in Moravia. The mode of reading adopted in these five institutions is that of the embossed Roman type, with capitals and small letters, and the method of pricking the Roman letters

is employed for writing. There seems nothing specially remarkable in the educational appliances in use, except that bas-relief figures of animals are employed to assist in the study of natural history. These figures are, however, of little use, and are not by any means as good as stuffed specimens. Music seems to be cultivated in all the institutions as a future means of livelihood, and the industrial arts common to the establishments are basket-making, rush and straw-plaiting, the making of list shoes, and knitting; brush-making is also carried on at Brunn. All the blind schools derive their chief support from the State, and the total number of inmates is from three to four hundred. Dr. Klein, the founder of the Vienna Institution, also became its first director, in which position he occupied himself for about half a century in constant and unremitting efforts for the welfare of those committed to his charge; and although the practical results of his labours are not such as the length of time and the attention devoted to the subject might lead us to expect, yet this seems to result rather from the preference which the Germans so long gave to theory as compared with practical utility, than from any want of interest shown in the subject by Dr. Klein; as, however, things in general are now mending in Austria, we hope that the blind may share in the advantages of the change. Printing in relief does not appear to have been regularly carried on in Austria until 1831, when the publishers Treunsinsky, of Vienna, issued several volumes, which seems to have acted as an incentive to the State Government, as, soon after, books for the blind were embossed at the imperial press. In 1825 an asylum for adults was opened at Vienna for the reception of those who had passed through the educational establishment. In this asylum the inmates are boarded and lodged, and employed in some manual occupation, the object, however, being rather to amuse the workers than to derive any pecuniary advantage

from their labours. Thus, although in 1855 the number of persons in the asylum was 70, the amount of cash taken on account of sales of their work was only about £70, or one pound per annum per head; and this circumstance is rendered more remarkable from the long list of industrial employments said to be carried on, which comprises the manufacture of baskets, list shoes, umbrella frames, spinning thread, hassocks, wire work, knitting, and bookbinding, which last-named employment, we imagine, applies to the binding of embossed books.

The expenses of the male asylum, and of that for females, established in 1829, amounted in 1855 to about £2000, which was met by voluntary contributions, and by payments on account of inmates. This says much for the kindness of heart of the Viennese, and a little more attention to practical utility will enable them to add to the happiness of the blind, and to extend still further their sphere of usefulness.

Switzerland.

Although there are no official returns of the number of blind persons in the Helvetian Republic, yet the census taken of Zurich in 1825 affords some idea of the state of the case. It is true, indeed, that the statistics were only taken in one canton, and that they were made as far back as forty-six years; but for want of more ample matter, we are obliged to accept this slender information as our guide. In the canton of Zurich it was found in the above-named year that the ratio of the blind to the general population was 1 in 1401, and accepting this as a general rule for the whole country at the present time, and taking the population at 2,510,494, we find that there are about 1780 persons without sight in the 22 cantons which form the republic of Switzerland.

The first institution for the education of the blind

established in Switzerland was commenced at Zurich in 1809, and schools for the same object have since been founded at Berne, Schaffhausen, Freiberg, and Lausanne. At the four first-named institutions, we believe, the common Roman type is chiefly employed for reading; but at Lausanne, Braille's system is dominant. Music is cultivated in all the Swiss institutions, and the principal industrial feature is the prominence given to the art of turning. It is, however, cultivated more as a fancy employment than as a means of livelihood.

At Berne, blind teachers are engaged, and at Lausanne, in 1855, workshops were opened for the adult blind, at the suggestion of M. Hirzell, the director of the school of that town, the funds being supplied by M. Haldinard and Madame de Polier, who gave conjointly the sum of £4000 for the purpose of erecting suitable buildings and for endowing the undertaking. The workshops were placed in connection with the educational establishment and the Ophthalmic Hospital, and the munificent donors were publicly thanked for their liberality by the authorities of the canton of Vaud, of which Lausanne is the capital. In this enterprise no provision was made for giving work to the blind at their own homes. In some cases the persons employed are boarded, lodged, and clothed at the establishment; in others they simply work there, and live in the town. As far as the funds permit, pensions are granted to the infirm and aged, and after death their funeral expenses are paid. There are no workshops for females, but a special fund has been raised by subscription for the purpose of affording them pecuniary aid on their leaving the school. The five educational establishments for the blind of Switzerland are principally maintained by grants from the local governing bodies of the cantons, or cities; but private beneficence is of great service in supplementing public grants.

There is at Lausanne a very interesting case of a young man named Edward Meistre, who is totally deaf, dumb, and blind. He has been in the institution for several years, and has become a successful manufacturer of turnery goods. It does not appear, however, that much progress has been made in the development of his mental faculties, and he evidently falls far short of the degree of intelligence attained by Laura Bridgeman, of Boston, America, who labours under the same triple misfortune.

Holland.

The population of this kingdom was, according to a recent census, 3,308,969, and the number of the blind 1990, or one in every 1663 of the inhabitants. It is claimed by the people of Amsterdam that an institution for the education of the blind existed in that city as early as 1779, being five years before the establishment of that of Paris; but, however this may be, a school was commenced at Amsterdam in 1808, which still exists, and if an earlier one was founded, the undertaking was subsequently abandoned. In addition to the institution at Amsterdam, there are now in the Netherlands, schools for the blind at Groningen, Rotterdam, Utrecht, and the Hague, and we believe that there is also an institution at one of the towns of North or Dutch Brabant. These establishments afford instruction to about two hundred and fifty persons of both sexes. The common Roman type is employed for reading to some extent, but at Amsterdam Braille's system is also used, and at Rotterdam, Moon's characters are exclusively employed. Music is taught in the greater number of the institutions, and the trades prevalent are those of basket-making, bottoming chairs with cane, mat-making, rope-making, netting and knitting. At the institution of Amsterdam there are seventy inmates, and

great attention is paid to the cultivation of arithmetic and geography, the maps used being on the principle of progressive elevation, similar to those invented by Herr Zeune, of Berlin. It is a remarkable feature of the Dutch charitable institutions for the blind that they are all, if we mistake not, supported entirely by voluntary subscriptions; and in this, while they resemble Great Britain, they form a striking contrast to the practice ruling in other European countries.

The school at Amsterdam was founded, and is now largely maintained by a body of Freemasons, and there is also in the same city an asylum or workshop for the adult blind, which was opened in 1843, and which has produced considerable good; but no attempt has been made to afford employment to the blind at their own homes.

Belgium.

The population of the kingdom of Belgium according to a recent governmental return was 4,529,560, and the number of the blind 3675, or one in every 1233 of the population.

It is remarkable that an institution for the relief of the blind existed in Belgium as early as 1305, in which year an asylum was formed at Bruges for the relief of persons deprived of sight by Robert de Bethune, Count of Flanders, in gratitude for the courage displayed by the inhabitants of that town, at the battle of Monsem-Pouelle, fought between the Count and the French king, Philip the Fair; and although this charitable establishment has passed away, the place of worship which was connected with it still exists. A similar house of charity was also opened at Gand about the year 1370, by Pierre Vander Leyen, but, like its predecessor at Bruges, it has disappeared.

The first school in Belgium for the education of the blind was commenced at Brussels in 1833, and there

are now similar establishments at Bruges, Antwerp, *i.e.* Anvers, Gand, Liége, Mons, and Namur. At Brussels and Gand there are two institutions, making the total number of schools for the blind in Belgium amount to nine, but in general each institution is only for persons of one sex. The school at Bruges, however, is an exception, as both boys and girls are admitted. There is also at Brussels a philanthropic society which lodges, feeds, and clothes the poor generally, and extends similar advantages to a few blind children and adults.

The educational institutions of Belgium contain about two hundred inmates and are usually managed by religious communities, a certain number of monks taking charge of the male establishments, and the nuns superintending those for females. This, as might be expected, gives an air of monasticism to the schools, unlike anything to be met with in Protestant countries; the education of the poor is not, however, neglected, and in the schools for the blind, it seems quite on a par with that of similar institutions in other lands. In manufactures the Belgians are very much behind the English and Germans, but they are about on an equality with the French. Music is taught as a means of livelihood, and a few years ago, the organist of the Roman Catholic cathedral at Antwerp was a blind man.

Braille's system of reading and writing is in use in all the institutions except that of Bruges, where the method invented by the Abbé Carton is adopted. Pencil-writing, as introduced by Haüy, largely prevails, and the Typhlograph, invented by Mr. Gall, of Edinburgh, is in use at Brussels, while at Bruges, black writing is effected by means of a style and tracing-paper, the letters being formed in the square holes of Carton's embossing frame. The common figures made in metal are usually employed as type for the arithmetical boards, but at Bruges the pentagonal peg, as used in England, prevails. The maps are made of needlework, but at

the Brussels school for boys, they produce embossed paper maps, from wires and pins fastened on boards. At Bruges they have a very good museum, consisting of stuffed birds and other objects, but it does not include inventions specially intended for the use of the blind, which is an omission to be regretted.

The industrial arts carried on are,—basket-making, bottoming chairs with rush and cane, and knitting. In some places also sash-line-making according to the old English plan is used, and at Bruges, bead rosaries are made for the use of Roman Catholics at their devotions.

When the author visited Belgium in 1865, he received the greatest courtesy from the Sisters and Brothers in charge of the various institutions for the blind, and he gladly avails himself of this opportunity publicly to return his thanks for their uniform kindness and attention.

The deaf and dumb, and the blind are invariably educated in the same establishments in Belgium, the institutions are chiefly supported by State grants. In some instances the various communes contribute to the maintenance of their own blind, and the friends and relatives of pupils frequently aid in the same direction. It is much to be regretted that the Belgians have not introduced any organization for affording regular employment to the blind, and especially so as they enjoy peculiar facilities for carrying out such an undertaking. The agricultural employments of the people render a constant supply of baskets indispensable, and osiers are very cheap. Coal mining also creates a demand in the same direction; and we believe that the blind might be very largely employed in making the sabots, or wooden shoes, so commonly used by the working classes of that Belgium and other continental countries.

The institution at Bruges was founded and for many years superintended by the eminent Abbé Car-

ton, who died in 1863. The following account of this event we copy from the journals of the day:—

"The late celebrated Abbé Carton, a Knight of Leopold, has just died at Bruges, after a short illness, in the asylum for the deaf, dumb, and blind, of which he was the founder and director. He was born in 1802 at Pitthem, in West Flanders, and after taking priest's orders, concentrated all his energies in providing for the deaf, dumb, and blind children, whose pitiable state had, from his early years, attracted his sympathies. Encouraged by the support and patronage of the late Mgr. Bousseu, Bishop of Bruges, he founded the sisterhood of the Children of Mary, a community which has been most successful in educating the children labouring under the above afflictions.

"The most interesting of all the lions of Bruges, 'that quaint old Flemish city,' as Longfellow calls it, was the acting by the deaf and dumb children of the Litany of Loretto, while the blind boys sang it. For the last twenty years the Abbé Carton has been the universally beloved and venerated director of this institution.

"He was a man of great ability, and, in spite of his arduous duties, found time to write several works of scientific and literary merit. After being exposed, clothed in his sacerdotal vestments, in a room of the asylum for two days, and being visited by a concourse of people, the body of Abbé Carton was taken to St. Saviour's cathedral for the last funeral rites, accompanied by the canons of Bruges and a regiment of infantry, the deceased being one of the Knights of the Order of Leopold. Mass having been said, the body was interred in the cemetery in presence of an immense number of persons, and a military salute was fired over the grave. The Abbé Carton was a canon of Bruges, and also of the metropolitan chapter of Paris, a member of the Royal Academy of Brussels, and of many other learned societies."

France.

Some writers have placed the number of the blind in France at 50,000. But this is evidently an over-estimate, as we find from a recent return made to the government that the ratio which the number of the blind bears to the general population is 1 in 938; and as the present population of France does not exceed 38,000,000, the number of persons deprived of sight would appear to be about 42,000.

To the French nation pre-eminently belongs the credit of caring for the blind; and although a comparison of what is at present done for this class of persons in France with the organizations existing for the same object in England, America, and Germany, would tend very much to lessen the claim of the French to that proud distinction,—yet, when it is considered that more than six hundred years ago an asylum, which still exists, was founded at Paris for three hundred blind persons, and that the first movement for the education of the sightless was also inaugurated in the same city, the French must be admitted to be, *par excellence*, the friends of the blind. The first institution in France for the education of the blind was commenced on a small scale in 1771, and permanently founded in 1784, at Paris, soon after which it received the patronage of the unfortunate Louis the Sixteenth. At first the establishment was supported by the voluntary contributions of the benevolent; but as the novelty of the undertaking wore off, necessity obliged its managers to seek governmental aid, which was very sparingly granted; the institution, however, successfully passed through all the stormy incidents connected with the French Revolution; and although the pupils were removed from place to place, the enterprise was never entirely abandoned.

At one time the juvenile pupils were sent to the Quinze-Vingts (the Asylum for Adults), and mixed with the old pensioners of that establishment, and at another they were compelled to share the domicile of the deaf and dumb children, but amid all these changes L'Institution des Jeunes Aveugles still survived; and although it had many enemies, no hand was found ruthless enough to extinguish so good a work. These changes, however, produced one great evil, which was almost irreparable, for the benevolent and talented Haüy, at length worn out with anxiety, and disgusted with the treatment he had experienced from the various politicians who had guided the destinies of France, left his native country in 1806, and placed his services at the disposal of the Russians. But this event, although injurious for a time to the blind of France, proved of signal benefit to those of Russia and Germany, and afforded another instance of how the calamities of some persons produce blessings to others.

At the Restoration of the Bourbons, in 1814, the Paris Blind School was remodelled, had suitable premises assigned to it, and Dr. Guillie was placed at its head. Under its new management the institution made considerable progress; but from some cause, which we are at a loss to understand, every effort was made to ignore the fact that it had been founded by Valentine Haüy, and it is even said that on his return to France, in 1817, and desiring to visit the establishment, permission was peremptorily denied him, and that he was turned from the door. However this may be, the book written on the blind by Dr. Guillie is most unjust to Haüy, and it affords *primâ facie* evidence in favour of the statement above named; it is, however, gratifying to be able to record that on the retirement of Dr. Guillie, in 1821, Haüy, a short time before his death, was specially invited to the institution, and a concert given in his honour, and also that a few years ago his statue was placed in the institution, and inaugurated with every demonstration of respect.

The writer visited the Paris institution in 1865, and found as follows:—

Braille's System of Reading is exclusively used, the books being printed from type cast on flat pieces of metal, fastened upon thin pegs, which are placed in lines in a frame somewhat like a gridiron, after having been arranged in a composing-stick of a very ingenious construction. This mode of setting up type prevents the matter being easily overturned; but it interferes greatly with speed in composition and distribution. The press employed is of the kind generally used by lithographic printers, and the galley in which the type is arranged seems to remain on the press during the time that the impressions are being taken. The blind are employed to work the press, and to arrange the type, sighted boys being engaged to read to them. The inmates of the institution bind their own books, but it is not considered a profitable occupation. It is a very singular circumstance that the pupils are not taught to write in any way that can be read by the sighted; and although there are at the institution many inventions for the purpose, yet they are placed in the room devoted to the museum, and (as one of the officials expressed it) are kept as curiosities; so that here we have the picture of some two hundred blind persons shut up in a building, and longing to communicate with their distant parents and friends, but unable to do so, although inventions for the purpose exist in great variety in an adjoining room. The museum seems to exist more for the inspection of sighted visitors than for the benefit of the blind, and although it contains a few specimens of stuffed birds, it does not appear that they are used for educational purposes. The common figures are employed for arithmetic, but no boxes are used to contain the surplus type, which makes the use of the arithmetical board a very tedious operation.

The maps are made by wire being fastened upon a

board, and covered with a map in common black print. They have also embossed maps fastened upon boards, but both kinds are of the most meagre description.

The cultivation of music is carried to great perfection, and instruction of a very high order is given on the organ and the pianoforte, and also in the art of pianoforte tuning, and in the use of various stringed and wind instruments. It is said that there are in France no fewer than two hundred blind organists holding situations, and as, for the most part, the services performed are those of the Roman Catholic Church, the testimony in favour of musicians without sight is proportionately strong. It is much to the credit of the officials connected with the Paris institution that they should have founded a society for the furtherance of the interests of the pupils who have learnt music, and we are glad to be able to state that this society still exists, and that although it is entirely supported by voluntary contributions, yet it is the means of accomplishing much good.

The mode of musical notation employed at the institution is that devised by M. Braille. Several volumes and many pieces of music have been printed, and copies are also made by hand with the embossing frame. A knowledge of the ordinary musical notation, as used by the sighted, is given to the pupils by means of a large board, on which the stave and musical signs are placed.

Instruction in the art of tuning the pianforte is carried to great perfection, and is found very useful by many persons on returning to their homes.

The string band of the institution is of the most excellent kind; but as a means of livelihood its utility is very small.

The manufactures carried on are exceedingly few, and they are far from flourishing. Some ornamental turnery-goods are made, and it is said that clever workmen have been known to earn five francs a day; but

when they leave the institution they cannot get work.

Bottoming chairs with cane and rush is also practised, the rushes being covered with a particular kind of straw which is twisted round them, and adds much to the appearance of the work. A portion of the trade of brush-making is also carried on, but it only consists in the fastening of tufts of wisk into holes with string, the holes being bored and the backs of the brushes put on by sighted men out-of-doors. The younger boys are employed at netting, and the only industrial art practised by the girls is that of knitting. The mode of conducting the manufacturing department is somewhat novel; the managers of the institution agree with a sighted tradesman (say a brush-maker), carrying on business in the city to give instruction to a certain number of blind persons at the institution, he undertaking to find materials and to receive the work done without making any payment to the institution, and the managers agreeing on their part to pay him 1800 francs or £72 per annum. It is in this way that all the industrial teachers are paid, and if they really instructed the blind and made them skilful workmen it would be a cheap mode of accomplishing a great end; but as a matter of fact they do not teach trades to the blind at all, and from the circumstances of their position it is next to impossible that they should do so. In learning a trade the pupils require to proceed step by step from one process to another, never continuing to do the same branch longer than is necessary to make them thoroughly acquainted with it, whereas, according to the French mode, it is the interest of the teacher to keep his pupils at the branch which produces most pecuniary profit to himself. We know it may be said that in such a case the managers of the institution would interfere, but how easily would such interference be met by the teacher's declaration that blindness prevented the pupils effect-

ing anything more than what they were then doing! and accordingly it is no matter of surprise that under the foregoing system, the French industrial departments are in a most unsatisfactory condition, and that, after having been eight years under instruction, the majority of the blind pupils leave the great Paris institution and enter the wide world helpless and hopeless.

The number of inmates of the Paris school, of both sexes, is about 200, and they are admitted between the ages of twelve and fourteen. The institution is supported entirely by the State and is the only establishment of the kind in France that receives such aid; there are, however, some small schools which are maintained by religious houses, voluntary contributions, and payments by the friends of pupils. Generally, in these establishments only persons of one sex are admitted, and the premises usually adjoin those devoted to the education of the deaf and dumb, which latter class of unfortunates mingle freely with the blind pupils. We believe that there are institutions at the following places:—Lisle two institutions, Lyons, Marseilles, Montpellier (supported by Protestants), Nancy, Soissons, Poictiers, St. Hippolyte du Fort (supported by Protestants), also two small schools at Paris, founded by M. Ratier, the one for boys and the other for girls. All these eleven establishments are very small, and it is probable that collectively they do not afford aid to more than 200 persons.

Braille's system of reading and writing seems generally adopted, and music is cultivated more as an amusement than as a prospective means of livelihood.

The industrial employments of basket-making, chair bottoming with cane and rushes, knitting, and the making of list shoes, are generally adopted, and at Nancy the art of turning is carried on to a considerable extent, and it may also be mentioned that at this in-

stitution they have a blind teacher of music who was educated at Paris.

An attempt was made some years since by M. Dufau, the present director of the large educational establishment at Paris, to found workshops for the employment of the blind; but the undertaking was very short-lived, and produced no lasting result.

The comparative fewness of the institutions for the blind in France as compared with England, and the absence of a poor-law, makes the practice of mendicity exceedingly frequent. In general, throughout the country the claim of the blind to solict alms is tacitly allowed, and such mendicants are seldom or never interfered with by the authorities; usually they play some musical instrument, frequently a barrel-organ, and they often beg in companies of three or four. The blind of France seem to have no idea of walking alone, for even mendicants have guides; and although the writer travelled several hundred miles through the country, including short stoppages of two or three days at eight different towns, he never found a blind person without a guide; and when he told some the inmates of the Paris institutions that many of the English blind travelled without guides, they were utterly astonished.

At the commencement of this article reference was made to the establishment of an asylum for the blind, by St. Louis, as early as the year 1260. This institution is still situated at Paris, and as its name imports (the Quinze-Vingts), it is intended for the reception of 300 persons. Both men and women are admitted, and each pensioner is allowed a room, and a franc and a half a day. They may also have their families to live with them.

The pensioners may live out of the establishment if they wish, but in such cases the grant of a franc and a half a day is reduced, but even in spite of this hardship many avail themselves of the permission, and

nearly all would be content to give up the room, if it did not involve the reduction of the pension.

What can induce the French Government to act in so paltry a manner with their poor sightless ones we are at a loss to understand. If they wished to give them the privilege of choosing their own domicile, why should they connect with it the penalty of loss of income?

Some of the inmates of the asylum make nets for their own benefit when they can get such employment, and one of the workers, a very intelligent and straightforward middle-aged man, assured the writer that he would rather live on a smaller sum and earn it himself than continue to be an idle pensioner, and that he would go anywhere and do anything to obtain constant employment.

This man, like all those whom the writer saw on the Continent, was enraptured at the English plan of giving work to the blind at their own homes, and expressed a strong desire to see the day when the practice should be adopted in his own country.

About sixty-six years ago a painfully-interesting episode took place in connection with the history of the Quinze-Vingts, an account of which it is thought well to insert here.

Among the inmates of the Quinze-Vingts, in February, 1805, was a person named Bérenger, whom all Paris knew under the cognomen of the "lucky blind man." His habit was to traverse the public streets, drawing a small carriage on which he mounted at convenient places and undertook for a small consideration to tell the fortune of the casual passers-by. With such success did Bérenger pursue this avocation that the director of the public lotteries, wishing to avail himself of his tact and popularity, induced him to sell lottery tickets on commission, and in a few years the blind fortune-teller found himself possessed of considerable wealth. He still, however, continued to reside

in the Quinze-Vingts, and having a mind to settle in life, he became passionately enamoured of a young girl named Louise, a relative of one of the inmates of the same institution; his attachment, however, was not reciprocated by the damsel, and Bérenger, being maddened by the knowledge that she favoured the advances of a young man named Pinson, the nephew of another inmate, determined to reap a most dire revenge. It was at the time of the carnival, and on the evening of the day known to the French as *Lundi-Gras*, that the aunt of Pinson was entertaining a small party in her chamber at the Quinze-Vingts. The company consisted of several inmates of the institution, including Bérenger. Pinson and Louise were also there, and appear to have been the only persons who could see. The conversation proceeded merrily until Louise, on rising to replenish the fire, took up a log of wood, which, on account of its extraordinary weight, fell to the ground, and, to the surprise of every one, broke in the centre, scattering over the room quantities of gunpowder, shot, and pieces of old iron. The consternation can easily be imagined. How came the gunpowder there, and what would have happened if the log of wood had been put upon the fire? were questions in every one's mouth. The news flew with lightning-speed and soon reached the ears of the director of the establishment, who forthwith put the matter in the hands of the police, who soon discovered that Bérenger had obtained a piece of hollow wood from a carpenter of the city, and also that the screws of his little carriage were found among the pieces of iron mixed with the gunpowder. On these grounds Bérenger was arrested and brought to trial on the charge of attempting to destroy the lives of several persons. Great interest was manifested in the case, and many would have gladly saved the culprit but the circumstances of the times were against him, for since the discovery of the infernal machine intended to destroy

Napoleon, the greatest indignation had been felt against those who attempted assassination by explosive contrivances. At the trial Bérenger simply denied everything; but circumstances, and the evidence of the carpenter, Pinson, and Louise were so strongly against him that notwithstanding the good character given him by many of his blind friends, who stated, among other things, how he had spent his money to relieve their necessities, he was condemned to death. On hearing the sentence, Bérenger rent the air with piercing cries and was with difficulty removed. The criminal, although without relatives who could render him assistance, found an active and influential friend in the treasurer of the Quinze-Vingts, who exerted himself to obtain the imperial pardon. An extraordinary fatality, however, seemed to hang over the reputed *lucky* blind man; his good fortune had evidently forsaken him, and justice would be vindicated. Napoleon was at that time in Italy, and nothing could be done without his approval. The ministry, nevertheless, granted a respite of fifteen days and forwarded urgent dispatches to the emperor on the subject, but by some inexplicable *contretemps* the papers never reached him, but were returned to Paris two months after unopened; at the end, therefore, of the respite of fifteen days the execution was ordered to take place. Bérenger, who had passed the whole time of his imprisonment a prey to torturing imaginations, on learning that his hour had come, abandoned himself to the most abject despair; at times the administrations of the excellent priest who attended him seemed to produce a good effect, but he soon relapsed, and he had actually to be forced to mount the scaffold, and to be physically restrained while the executioner performed his office. The spectacle of thus viewing a blind man dragged to the guillotine filled the crowd with horror, and they drew back from the sight evincing every sign of grief and loathing. We may add that this

appears to be the only case on record in which a blind man has suffered or deserved the extreme penalty of the law; and it certainly ought to teach those who have the least faith in fortune-telling that luck is a very flimsy thing, and that the most fortunate have often found themselves at the other end of the *rôle* just when they fancied they had reached the height of success.

Spain.

It is matter of regret that no regular returns exist of the number of the blind in the above country; it is, however, probable that the proportion which the sightless bear to the general population is about one in every eight hundred, and as according to a recent census the inhabitants of the whole country are stated to be about 16,000,000, the number of the blind in Spain may be taken at about 20,000.

The first institution for the education of the blind in the Peninsula was commenced at Barcelona in 1820, but it seems never to have advanced beyond the position of a day school, and its present state is far from prosperous.

In 1834, M. Balestros (the director of the Institution for the Deaf and Dumb at Madrid) being struck with the extreme wretchedness of the blind of his native country, and resolving to do something to remedy it, exerted himself to secure influential patronage, and succeeded in obtaining a petition to the Government signed by various members of the Economical Society of Madrid, to which he received a reply in 1836, wherein the Spanish Ministry of that day expressed their approval of his design of teaching trades to the blind, but objected to persons without sight being taught to read, on the ground that it was an unnecessary luxury, which those who could afford might obtain more cheaply by paying the sighted to

read to them than by having books specially printed for their own use. But although the teaching of trades was approved, and a sum of 26,000 livres (about £1000) voted for the establishment of an institution, nothing was commenced until 1841, when the indefatigable M. Balestros succeeded in obtaining an audience with Queen Isabella and her sister, and exhibiting the acquirements of a young blind girl named Isabella de Diego Alvarez, whom he had instructed in reading, writing, geography, and music. This examination lasted three hours, and at its close, on the blind pupil kissing the Queen's hand, she took the opportunity to implore her royal favour for the blind of Spain. In consequence of the interest excited in her Majesty by the above examination, an institution for the blind was soon opened at Madrid, at the head of which was placed M. Balestros, who, that he might be thoroughly fitted for his work, was sent, at the expense of the Government, to visit the institutions of France and Germany. The two schools for the blind of Spain, such as they are, depend for their support on national grants and the donations of communes, and they extend scanty assistance to about one hundred and fifty persons. Braille's system is employed for reading and writing, and for musical notation, but two or three rival Spanish systems have appeared and have obtained some success. The British and Foreign Bible Society have recently published the Gospel according to St. John, in Spanish, price three shillings; the characters employed being those of W. Moon, as modified by the Society. Maps made in wood and paper are used at the institutions of Madrid and Barcelona, but they seem to be of a very rudimentary character. Considerable attention has been paid to orchestral music, especially at Barcelona, but as a means of livelihood this is almost worthless. The only industrial arts carried on are basket-making, netting, and knitting, and these to a very small ex-

tent. The number of blind mendicants in Spain is very great, and visitors to Madrid state that the streets of that city swarm with them.

Portugal.

Of the number of the blind in this kingdom there are no authentic returns; there are, however, good reasons for believing that the ratio is about one in every eight hundred of the inhabitants; and as the population of the country is about 3,600,000, the number of the blind cannot be less than 4500, and for the relief of their sufferings next to nothing has been done. Some years ago an institution was commenced at Lisbon, but whether it still exists we have been unable to ascertain. If the conduct of Spain towards those deprived of sight is bad, that of Portugal is worse, and the sooner the descendants of the discoverers of the Indies learn a little more humanity the better.

The Kingdom of Italy.

The above nationality has been so recently formed that no authentic materials exist respecting the number of persons without sight. Assuming, however, that the population of the kingdom is twenty-five millions, and that the proportion of the blind is one in eight hundred, we arrive at the conclusion that the number of persons who are deprived of sight is thirty-one thousand two hundred and fifty, which is in all probability far below the truth.

It is a very remarkable circumstance that the first book published on the condition of the blind was written by an Italian, and was printed in Italian and French, in 1646. A free translation of the title of the work is as follows:—

A Consolation to One afflicted with Blindness, being a Letter from S. D. C. to Vincent Armanni.

As a literary curiosity, we think the reader will excuse our giving a copy of the title of the above work in the original Italian and French, as taken from the volume now in our possession, namely :—

IL CIECO
AFFLITTO
E CONSOLATO.

L'AVEUGLE
AFFLIGÉ
ET CONSOLÉ.

A PARIS,
CHEZ LA VEUUE IEAN CAMVSAT
ET
PIERRE LE PETIT RUË SAINT IACQUES;
À LA TOYSON D'OR.
M.DC.XLVI.
AUEC PERMISSION.

This volume consists of a variety of consolations drawn from a contemplation of religion and the operations of Nature, and it would be well worth translating into English, and offering to the public, both on account of its intrinsic value and from considerations of its antiquity. The present writer has had grave thoughts of undertaking such a task, but has been obliged to come to the conclusion that the interest of the public in matters connected with the blind is not at present sufficient to warrant his incurring the expense.

The first institution for the assistance of the blind in Italy was established at Naples, in the year 1818,

but whether it still exists is very doubtful. There is, however, in the same city, a School for Blind Mendicant Children, founded about 1864 by Don L. Rodino, at the the Albergo dei Poveri (which contains nearly five thousand paupers, and is believed to be the largest workhouse in the world). The blind and the deaf and dumb possess the exceptional privilege of being admitted, even though they may not have been born at the city of Naples.

Within the last twenty years, an Educational Institution for the Blind has been established at Milan, which has already reached a considerable degree of excellence. The mode of reading adopted is that of the embossed Roman type, and writing is practised both with the pencil and by means of an apparatus which produces the common black print; an arithmetical board is also employed. Music is cultivated to a very high degree, and the manufactures are baskets, articles in pasteboard, and knitted goods.

It is probable that the total number of persons without sight in the Italian educational institutions does not exceed a hundred and fifty, but the data on which this estimate is founded are very slight. At various times efforts have been made to establish schools for the blind at other towns than those above named, but these attempts seem almost entirely to have failed, and if any institutions now exist at such places, they are on a very small scale. The names of the cities at which such attempts have been made are Rome, Bologna, Turin, Padua, and Palermo, and it is greatly to be wished that the present enlightened Italian Government would direct special attention to the condition of the blind of the kingdom, so that permanent Institutions for their welfare might be established at the foregoing places, and at as many other towns as might be found desirable.

About the year 1870 a donation was given by King Victor Emmanuel for the establishment of an institu-

tion for the blind at Florence, and it is therefore believed that such an undertaking is now in operation in that city. In Sicily, in 1839, a courageous attempt was made to establish a newspaper in relief print; the periodical was entitled, 'Consolation for the Blind,' but the undertaking met with very little patronage, and was in consequence soon given up.

Mendicity is the normal state of existence of the blind in Italy, even to a greater extent, perhaps, than in any other country of Europe, and foreigners remark that sightless beggars form a striking feature of the carnival at Venice; and many blind persons make straw baskets, and little ornaments of cherry-stones, which they offer for sale in the streets.

Greece and the Ionian Islands.

The kingdom of Greece, as now constituted, contains a population, including the Ionian Islands, of about one million and a half, and although there are no returns of the number of the blind, yet there is good evidence for believing that the ratio is not less than one in every eight hundred of the inhabitants, and it is therefore safe to conclude that there are at least 1875 persons without sight in the kingdom.

As far as can be ascertained, there is no institution of any kind in Greece for the relief of the blind, but it may be hoped that ere long the descendants of Homer and Timoleon will take away this reproach from their country; and especially in this matter do we look to the numerous and enlightened sons of Hellas resident in Western Europe, whose philanthropy could not be better employed than in alleviating the misfortunes of the blind of their own fatherland.

Turkey in Europe, Montenegro, Servia, and the Principalities of Moldavia and Wallachia.

Of the number of the blind in the States above named there are no authentic returns; but taking the total population at thirteen millions, and accepting the ratio of the sightless as one in every eight hundred of the inhabitants, we arrive at the conclusion that there cannot be fewer than 16,250 blind persons in European Turkey and the adjacent semi-independent principalities.

In the countries of which we are now treating, there is not a single institution for the welfare of the blind; but of late years some Christian missionaries at Constantinople have formed classes of persons deprived of sight, for the purpose of religious instruction, and the mulahs, or Mahommedan priests, fearing the loss of their flock, have emulated the missionaries in this respect.

It is probable that these efforts may result in the establishment of permanent institutions for the promotion of the intellectual and physical welfare of the blind; but for the present, both Mussulmen and Christians allow their poor sightless ones to beg or perish, without stretching forth a hand to save them.

ASIA.

Turkey in Asia.

Of the number of the blind in this division of the Ottoman Empire, there are no authentic returns; but placing the population at 17,000,000, and taking the proportion which those without sight bear to the general inhabitants as 1 in 600, which is probably below the truth, we find that the number of the blind

exceeds 28,000. The only known effort made for the welfare of the sightless in the Asiatic dominions of the Sultan is that by Mr. Mott, a Protestant Christian gentleman of Beyrout, who has caused several portions of the Holy Scriptures to be embossèd in Arabic in Moon's characters, and has taught many blind persons, one of whom is constantly occupied in reading to the poor. This philanthropist and his family, aided by the efforts of Mrs. Bowen Thompson, of London, have succeeded in establishing two institutions for the blind in Syria, which are situate at Beyrout and at Damascus, but they are both at present in an infant state. Great promise, however, exists of an early development and a career of great usefulness. The British and Foreign Bible Society, being influenced doubtless by Mr. Mott, have published, in Arabic, in Moon's type, as modified by the Society,—St. Matthew's Gospel, 3*s.*; Acts of the Apostles, 2*s.* 10*d.*; the Epistles to the Romans and the Corinthians, 3*s.*; the Revelations, 2*s.* Although the Turks take no means to improve the condition of those who are deprived of sight, yet they sometimes find by sad experience that blindness does not disqualify those afflicted by it for active exertions, as the following account of the exploits of a blind bandit, who lived about fourteen years since, will strikingly show. The writer of the narrative says,—

"As Dr. J. Macraith was riding out to a village, about ten miles from Smyrna, to visit a sick lady, he was attacked by a band of robbers and compelled to accompany them to a range of mountains many miles distant. Three or four gentlemen who were with him were seized at the same time. The chief of the robbers, Blind Simeon by name, sent word to the city by a shepherd, that he asked a ransom of £3000 sterling for his captives. Colonel Storks, the governor of the British Hospital, went out with a large body of Turkish soldiers, two-thirds of the civil doctors, and

six or seven English officers to effect a rescue. This expedition, however, had no favourable result. The robbers subsequently dispatched one of the gentlemen who was taken captive to Smyrna, reducing the ransom of the whole party to £300 sterling; adding, however, that if the messenger gave notice of their whereabouts, or brought back any soldiers with him, his friends would be forthwith put to death. Dr. Macraith returned to Smyrna, having received, after a week's captivity, his liberty, his watch, and £1 travelling expenses, upon payment of a ransom of £500. Simeon, the chief, was very polite, and shared with him whatever food the band happened to possess. He likewise seized for Macraith, who became fatigued, a donkey belonging to an old Turk and a boy, both of whom were afterwards shot.

"It was thought that one of the civil medical staff had been taken, and Simeon sent a message by Dr. Macraith to Smyrna, saying he intended ere long to have a person for whose ransom he would require £3000, and for the commandant, Colonel Storks, he should demand £20,000." It would appear almost certain that the other captives were released with Dr. Macraith, but the narrative from which the foregoing particulars are taken makes no mention of the circumstance, neither does it explain why the ransom after having been reduced to £300 was increased to £500; we suppose, however, that delay in forwarding the money caused the bandits to raise their demand.

Arabia.

Taking the population of Arabia at ten millions, and, on account of the sandy nature of the soil, the peculiarities of the climate, and the observations of travellers, placing the ratio of the blind as one in every 400 of the inhabitants,—we arrive at the conclusion that there are no fewer than 25,000 persons without sight

in independent Arabia. In addition to the causes already named, there is a particular kind of fly in the country which is specially inimical to sight, and on the shores of the Persian Gulf many of the Arabs employed as divers in the pearl fisheries, become blind from inflammation.

Russia in Asia.

Of this portion of the dominions of the Czar we have no authentic data respecting the number of the blind; but if we estimate the population of Siberia, the Trans-Caucasian provinces, and the possessions of Russia in Central Asia, at ten millions, and accept the ratio of the sightless as 1 in 800, we find that the number of the blind is about 12,500. For the assistance of persons without sight there is no provision made in the above-named territories, which can scarcely be wondered at, seeing that so little is done for the blind in European Russia.

Tartary or Turkestan.

Accepting the population of Independent Tartary as four millions, and placing the ratio of those without sight at 1 in 600, we arrive at the conclusion that the number of the blind in the various states occupying the country is about 6600. This however, like everything connected with Turkestan, is only problematical, and may be very far from the truth.

The shocking practice carried on in Tartary until within the last few years, of putting out the eyes of criminals in the most barbarous manner, has been so fully described in the article on the causes of blindness, that any further notice of it here is unnecessary.

Afghanistan.

If the population of this country is taken at five

millions, and the ratio of the blind as 1 in 600, the number of persons without sight will be about 8300; as, however, the population of Afghanistan is not known with anything like certainty, any conjecture as to the number of the blind must be of the most superficial character.

Persia.

The population of this kingdom is variously estimated from eight to ten millions, and accepting the latter number, which we think there is good evidence to show is nearer the truth, and placing the ratio of those without sight at 1 in 600, we find that the number of the blind amounts to about seventeen thousand.

In the year 952, a blind poet obtained great popularity in this country, and possessing much influence over the monarch, he was raised to such wealth that he had 200 slaves to attend him. The poet's name was Abul Hasan Rudegi, and it is said that he wrote no fewer than 1,300,000 verses, besides other works; these productions, however, must have possessed small merit, as very few of them now exist.

About the middle of the seventeenth century, Habas the Great, Shah of Persia, put out the eyes of a prince of the blood royal, named Mirza Rezi, to prevent his ever being called to the throne; and this blind prince, having given offence to many of the powerful courtiers by his determination to manage his own property, was in the reign of Abbas the Second imprisoned in a quarter of his palace, the only companion of his confinement being another prince who had been deprived of sight for similar reasons of state policy. On Lefie the Second coming to the throne he released Mirza Rezi, restored him his estates, and treated him with every mark of consideration. It is worthy of remark that on his being set at liberty, this blind prince

devoted himself to the improvement of his property in the most business-like way. He built streets, and turned cemeteries into bazaars in a manner which utterly astonished Orientals, and would do credit to any modern speculator of London or New York.

The acquirements of this royal personage are so well worthy of notice that we translate a description of them from the works of the French traveller Chardin. Mirza Rezi, says our authority, devoted himself especially to the studies of astronomy and the mathematics. He calculated the movements of the heavenly bodies, and performed the various algebraic rules with as much correctness as though he had been a sighted professor in a European college. In the execution of these operations he sometimes proceeded as follows. He took a tablet of wood, or other suitable material, from twenty-five to thirty inches in diameter, and having placed one of the points of a pair of compasses in the centre of a circle he wished to draw, he traversed the board with the other point of the compass, at the required distance from the centre, and marked the line thus traced with a stick of soft wax or gum, about the thickness of the point of a needle.

If he wished to form a triangle, or any other figure, he proceeded in like manner, his judgment guiding him as to the motions of the movable point of the compass. He also formed letters and figures with wax in like manner with complete success, noting down the degrees and minutes, and performing the operations of addition and subtraction, etc. in a way which utterly astonished his European visitor. Of course, he employed sighted readers; but the manner in which he triumphed over the various difficulties of his position shows that even at that early age, and in a country so remote from what we are accustomed to deem the centres of civilization, a blind person set at nought the efforts of man and nature, and succeeded

in providing food for his mind when under the influence of the most crushing circumstances.

Mirza Rezi was also passionately fond of watches and clocks, and in his confinement possessed upwards of 200 of such articles. He could take them to pieces and put them together with the greatest accuracy, and frequently gave as much as £40 for a timepiece, the only merit of which consisted in the excellence of its works. It is much to be regretted that the composition of the wax used by this prince is now unknown, as its use would be of essential service in the instruction of the blind.

In Persia it is common for the blind to walk about the cities without guides, and mendicancy is their ordinary mode of obtaining a livelihood. These circumstances are sufficiently shown by the following incident related by E. B. Eastwick in his 'Journal of a Diplomate's Three Years' Residence in Persia,' vol. i. p. 265; describing a procession advancing to the race-course, he says,—

"After a number of grandees had passed with numerous trains of attendants, a body of royal Farrashes made their appearance with long white wands, shouting furiously to all and singular, to get out of the way. These men preceded the ladies of the Shah's harem, and their zeal seemed to border on the comical, for an unfortunate blind beggar having wandered across the line of beauty, a number of them rushed upon him, and handled him about as mercilessly as if he had all the eyes of Argus, and the indiscretion of Actæon. The bewildered mendicant at one time plunged frantically towards the sacred carriages, instead of flying from them, and then such a hubbub arose that I gave him up as lost; but at last he was cuffed and poked out of the way till he disappeared from my view."

India.

According to official returns, the population of that part of India directly subject to the English Government is 132,000,000 of souls, and the number of the inhabitants of the so-called Independent States of Hindostan, including Burmah, is 45,000,000, and if for our purpose we combine these figures, we find that the total population of India amounts to 177,000,000.

Considering how large a proportion of this country lies within the tropics, and that that portion is by far the most densely peopled, considering also the habits of the Hindoos, and the deficiency among them of medical skill, we are forced to the conclusion that the persons within its limits who are without sight are not fewer than 354,000, which is a ratio of 1 in every 500 of the population.

That British Christians and the British Government should not have done anything to alleviate the misfortunes of these 354,000 sightless ones, who are by God's providence entirely dependent upon their care, is a matter at which we may well be surprised; but we hope that ere long, principle will have more to do with the government of India than it has hitherto had, and that the professed followers of Jesus will not think it their duty to cut people in pieces, or blow them from the cannon's mouth when they will not obey them; and, when they are obedient in all things, leave their souls in darkness, and allow hundreds of thousands to perish for want of the commonest necessaries of life. Surely the British people cannot imagine that the great Father of mankind has placed hundreds of millions of human beings under their sway for the sole purpose of enabling a few hundred sons of Albion to amass large fortunes. But our work is with the blind, and not to write an article on the government of India, and we shall therefore close

these remarks by expressing the hope that the hundreds of thousands of the sightless inhabitants of Hindostan, may soon feel the force of English Christian philanthropy, and also by observing that the Hindoos themselves seem to be very liberal towards persons without sight, as they allow them to enjoy all the privileges of caste, and that with them a Brahmin though blind, is a Brahmin still.

The Dutch East Indies.

The governmental returns give the population of this division of Asia as 16,354,000, and as the countries included in the estimate are generally of an equatorial character, the proportion which the number of the blind bears to the general population is probably 1 in 300, according to which estimate the subjects of Holland in Asia without sight cannot be fewer than 55,000.

Unfortunately we are obliged to add that the Dutch, like the English, have hitherto done nothing for the blind of their East Indian dependencies, but it is to be hoped that ere long the thrifty inhabitants of the Netherlands will rid themselves of this reproach.

Siam and Cochin China.

These two countries although entirely independent of each other, are yet so much alike as regards the estimate of population and the probable number of the blind, that we have placed them together in the above heading.

In each kingdom, including dependencies, the population is 6,000,000, and the probable ratio of the blind 1 in 400, which gives the total number of persons without sight in Siam and its tributaries of Cambodia and Lahos as 15,000, and also a like number for the kingdom of Cochin China.

The Philippine Isles.

These Spanish colonies contain a population of about 5,000,000, and as their geographical position warrants us in considering the ratio of the blind as 1 in 400, the number of persons without sight in the archipelago cannot be fewer than 12,500.

The Spaniards have not yet made any effort for the welfare of their sightless Asiatic subjects, but this can hardly be wondered at when the English and Dutch have set them such a bad example.

China.

The population of this vast empire is variously estimated from 300,000,000 to 500,000,000 of souls; accepting it, however, as 410,000,000, which is the computation of the best authorities, and taking the ratio of the blind as 1 in 400, (which is fully justified by the geographical position of the most populous parts of the country,) it is evident that there cannot be fewer than one million and twenty-five thousand persons without sight in the Celestial Empire.

Although institutions for the relief of suffering and the suppression of vice are very numerous in China, so much so, indeed, that that empire is superior in this respect to many European countries,—yet, as far as we know, there is not a single native establishment specially devoted to the alleviation of the sufferings of the blind. Societies for the benefit of widows and orphans there are in abundance, as also medical dispensaries and hospitals; but the blind are classed indiscriminately with common vagrants, and the only privilege accorded to them is the permission to subsist by alms. The vagrant classes in the flowery land are very numerous, but the blind excel them all in numerical strength. In the various towns and provinces of the Chinese empire, mendicants are supplied with certain

daily rations at the public charge, but these allowances being insufficient for their maintenance, they are permitted to solicit charity from house to house; and such is the spirit of organization which prevails, that they form themselves into regular associations with recognized leaders and accumulated funds. The leaders conduct commercial transactions on behalf of their societies, among which undertakings, the discounting of bills is a favourite speculation, and in connection with this subject, it may be mentioned, that whenever the payment of a bill is not duly met, the residence of the delinquent is attacked by a whole army of beggars, who destroy his goods, and threaten to pull his house down on his head unless he makes immediate payment; and as the beggars are seldom interfered with by the authorities, they generally succeed in attaining their object. Some of those without sight play on a kind of violin, and sing for a subsistence; and it is a remarkable circumstance to find that many of the blind procure a livelihood by telling fortunes; indeed such celebrity have they acquired in this way, that it is said they have a monopoly of the business; all they require to know is the age and the day and hour of birth of any one inquiring, and they will pretend to give his future history.

There is a remarkable episode in Chinese history which speaks very highly for the powers of memory possessed by some persons without sight, and at the same time offers a strong reason why the inhabitants of the Celestial Empire should hold the blind in lasting respect.

About the year 220 B.C. the Emperor Ching, the most famous ruler China ever had, and the builder of the great wall, made an attempt to destroy all the then existing literature and records, and put many learned men to death, fearing that they might excite the people to rebellion. This revolutionary monarch seems to have nearly succeeded in accomplishing his destructive pur-

pose, but on the revival of literature under the dynasty that succeeded him, the text of the most historical work which Confucius included in his collection, was partly recovered from a blind old man, who was able to repeat it from memory, and a copy of the original being afterwards found in the ruins of the house of Confucius, the correctness of the extraordinary memory of the sightless patriot was fully established.

It is much to the credit of the Christian missionaries of China that they have paid considerable attention to, and have done what they could to mitigate the sufferings of the blind; and some idea of the number of such persons with whom they have come in contact, may be gathered from the circumstance that out of a total number of seven or eight hundred poor who shared in the rice distributions at the Canton Mission House some ten years ago, there were no fewer than five hundred and ninety-nine persons without sight. About thirty years since, the humane Prussian missionary Dr. Gutzlaff succeeded in rescuing six blind Chinese girls, two of whom were sent to America and placed at the Philadelphia Institution, and four became inmates at different times of the schools of the London Society for Teaching the Blind to Read, St. John's Wood. The greater number of these poor children died in their adopted countries, but about thirteen years ago one of the number—named Agnes Gutzlaff, after the name of her benefactor—returned to her native land, and became the principal teacher at a school for the blind, opened by Miss Aldersey, one of the missionaries at Ningpo. For the use of this school a portion of the Gospel of St. John was printed in Chinese in Lucas's characters, under the direction of Professor Summers, of King's College, London, and books in relief print were subsequently issued in the same language in Moon's characters.

When a few years since, Ningpo was taken by the rebels, this first school for the blind in China was

broken up, but it is satisfactory to find that although one door was thus closed, another has been opened, for by persevering Christian effort, an institution has been founded at Shanghai, an account of which we now subjoin, as given in a letter from the Rev. E. W. Syle to James Hogg, Esq. Writing of this matter, the good missionary says,—

"My dear Sir,—Your observations concerning the Chinese blind poor have thrown my thoughts back twenty years, and recalled to my mind some of the incidents connected with those efforts for their good which resulted in the establishment of that institution in which you have taken so friendly an interest. I do not know in what way I can better make you acquainted with the things you wish to know than by telling the little history just as it occurred. In doing this, I find myself carried back to the early days of 1845–48, when most of us lived in the south-eastern suburb of the Chinese city, near the Tung-ka-Doo; when the British Consulate was within the city walls, and the present 'settlement' and 'concessions' were not known as such. These were the days when it was possible to visit the whole foreign community in a couple of hours on New Year's morning; when every resident knew every other resident, and merchants, missionaries, consular officers, and seamen were drawn together as one neighbourly little community. A good instance of this harmonious condition of things was our all assembling together on Sunday mornings, for divine service, at the British Consulate. Captain (now General) Balfour, the Consul; English, Scotch, and American; Episcopal, Presbyterian, and Congregational; we all attended this service for a considerable time and found it a great rallying point of interest and good neighbourship. Our communion services, however, were always held at Bishop Boone's house; and it was the offerings made on these occasions which formed the little fund out of which relief for the poor

was first provided. Happily at that time we had no Christian poor around us needing assistance. We therefore turned to our poorer Chinese neighbours, and made selection from amongst them of such as seemed most needy: giving them each a small weekly pension, and adding some Christian instruction when they came on a fixed day to receive it. In this way, Mr. M'Clatchie and myself, and more especially our lamented brother Spalding, endeavoured to discharge our duty as almoners of the church.

"But alas, we soon found that all kinds of impositions on us were attempted, very much as it is at home, when any charitable operations are engaged in. I will not undertake to enumerate them; but only say that we came to the conclusion that our best plan would be to take the blind, as an unquestionably suffering class, under our charge. We felt sure that we could not go far wrong in giving *them* some 'aid and comfort,' and therefore our pensions were allotted to them in preference to all others.

"This arrangement proved much more satisfactory; and one of the results was that being brought under regular instruction, and encouraged (though not required) to observe the Sabbath Day, many of them became applicants for baptism, so that among our early converts here there was an unusually large proportion of those whose eyes were blinded—as far, at least, as *this* world is concerned. Notwithstanding this improvement, I did not myself feel entirely satisfied. There was a languor, inertness, and a stupor about our poor pensioners which convinced me that all we wished for had not been accomplished; they were evidently far from happy, even with that modified happiness which the blind often attain among ourselves, notwithstanding their bereavement. It did not take long to perceive that what they wanted was 'something to do,' but what that something should be did not so readily appear. On inquiry, it was found

that among the Chinese, blind people were largely employed as fortune-tellers, sometimes as guitar-players and ballad-singers; that some earned a few 'cash' by grinding in the oil mill, going round and round in a circle of not more than ten feet diameter, and others, more skilful, worked during the cotton season at cleaning the seeds from the raw material. Others again went about the streets gathering old paper with writing on it, which they sold to a certain temple for burning.

"None of these methods seemed feasible for a general undertaking; and I was almost at my wit's end when one day I happened to observe a poor woman twisting some long sedgy grass into strings, such as are used for holding together, by hundreds, the copper 'cash' which are in such constant use. 'This is the very thing,' I said to myself; and forthwith asked the woman (very much to her surprise) whether she would come and teach some blind people to work? Thinking, perhaps, that I was slightly deranged, she gave a kind of half promise that she would, by way of humouring and getting rid of me. So far so good. But what of the blind people themselves? Could they be induced to work for their cash, instead of receiving it as alms? Ah! there was the rub! And I assure you the process of getting their consent was quite amusing and illustrative. Imagine us assembled as usual on occasion of the weekly disbursement, the little pile of cash on the table, and the blind all sitting on the church benches waiting to hear what I had to tell them; for, somehow or other, an impression had got abroad among them that 'something was going to happen,' and they felt a general uneasiness accordingly. This I soon relieved, by explaining my principle and project. 'You have been taught,' I said, addressing the Christians among them, 'the words of the fourth Commandment. Now, that Commandment has two sides—the *resting* and the *working* side; one day *rest*,

six days *work*. This is part of our religion.'—'Ah, indeed! They had never thought of that before. But what *could* they do? Poor blind helpless creatures, how could *they* be expected to do anything!' I suggested the cash string. 'O, no; impossible! Such a thing had never been heard of.' This last is a very strong Chinese argument; so I closed the conference by giving them another week to think over the matter and come to some conclusion about it, knowing that it would take a little time for them to get accustomed to the new and rather unwelcome idea.

"I will not attempt to describe the exercises of mind they are said to have gone through at this stage of the proceedings; what conferences they had in teashops and at the various places of rendezvous where four or five were accustomed to meet together. About all this, of course, I knew nothing officially, but waited quietly till the next weekly gathering. There was a pretty general attendance, and an air of important resoluteness was apparent in all countenances, especially in those who were accustomed to be spokesmen for the rest. 'Well,' I began, 'what conclusion? Have you found out what you can do during the six working days of the week?' The reply was evidently well considered. 'Syle, elder-born, we are quite satisfied; we cannot possibly do any work at all. No, we *cannot*.' Emphatic pause. The resoluteness of countenance becomes rigidly fixed. Evidently the crisis had come and must be met. Plainly it rested with me to break the silence, which I did somewhat thus. 'This is unfortunate; for our religion says, "A man that will not work, neither shall he eat;" and I am going to act on that principle. Those of you who will learn to work for the next month shall have forty cash a day, and after that we can have another conference. Those who will not learn need not come for any cash at all.' Deadlock for some time, then little murmuring conversation among the leaders, and at last signs of re-

lenting began to appear. Indeed, before the meeting broke up they came to take a cheerful view of the whole thing, and were highly amused at the idea of blind people presuming to be operatives!

"The cash-string woman was summoned, her teaching commenced at once, and there has been no more of the '*non possumus*' argument. On the contrary, I can assure you that from that day there has been a gradual but marked improvement in the whole bearing of these poor people. They have brightened up wonderfully, and seem to look upon themselves as persons of no small consequence—members of a highly respectable community! I could give you many instances of individual improvement and development of character among these, our patiently-suffering fellow-creatures, but I feel that I need not say anything to excite in you an interest which is already felt.

"Let me, however, briefly recount the things which followed on this good commencement, for they show how all things are made to 'work together for good' when we have in hand any work so unquestionably Christian as caring for 'the poor, the halt, the maimed, and the blind.' The place where the first attempts were made—where the surprised teacher was put in charge of her bewildered scholars—was the outer part of a building in the city, then occupied as a preaching place by the American Methodist Missionaries. This they had very kindly lent me, and we continued there for several weeks, but increased numbers and greater convenience caused a removal to two apartments near our own (Episcopal) church, also in the city. While here, a new kind of work was added—making straw shoes, and the purchaser of the first lot of these was a man for whose memory I have the sincerest respect, Kiung Fong-tsun, late superintendent of the Chinese Doong-Zung-Dong, or Hall of Universal Benevolence.

"Here also a kind friend from among the merchants

looked in upon the little beehive, and gave as a memento to his visit, a donation which has ever since been a kind of backbone to the institution, and has sustained it through a trying period, when other accustomed aid has failed. Then came an offer from other friends to buy a little lot of ground. Whereupon our first-named benefactor gave further aid, and built us a house for a workshop. Both ground and house have recently been put in order after the devastation caused by the rebel occupation of the city. Work also (which for some years was intermitted) has been resumed, so that we feel now as if we were under way once more, and hope to make our annual voyage successfully, looking for warm-hearted friends, both old and new, to stand by us as occasion may require.

"There are new difficulties in our way, however. The coir door-mats which we began to make at the suggestion of a friend among the sea captains, those unprofitable durable mats, of which I find remaining still in use some that were made at least ten years ago,—these plain but most serviceable articles are now too plain for the present taste of our refined foreign community. They fail to find favour in the eyes of the fastidious, even at the price of one tael each. What can be done herein? Does your ingenuity suggest a remedy? If it does, pray communicate your thoughts to me at once, and thus oblige

"Yours, very sincerely,

"Edwd. W. Syle.

"P.S.—One incident I have omitted, which must not be forgotten, or my little history would be incomplete.

"It was at the same time when we were beginning this poor blind work that we were also endeavouring to establish what has now become the N.C.B. of the Royal Asiatic Society, and it was for the purpose of enlisting his interest in the latter, that I addressed one of our commercial friends, whose name (with those

of the others previously referred to) I have purposely refrained from giving. 'No,' he said, 'I cannot join you in that, but you have another project in hand which I should like to assist. Send me the subscription paper for your blind people.' I did so, and after a week or two it was returned to me with a goodly number of names added, and annual subscriptions to the amount of between five and six hundred dollars. I could wish this good friend had a successor, who would volunteer the procuring of a like number of subscriptions from among the present community, which must be three times as numerous as it was in the days of which I have been writing. We have had forty of the blind on our list, there are only thirty now."

Japan.

According to the most trustworthy authorities, the population of this island empire is about 50,000,000, and the observations of travellers, and the geographical position of the most populous portion of the State, warrant us in supposing that the ratio which those without sight bear to the general inhabitants is about 1 in 400, which computation places the number of the blind at one hundred and twenty-five thousand.

One of the customs of the people of Japan most injurious to sight is having their eyelids daily turned inside out, and then rubbed over, titulated, and polished, with a smooth spatula. No wonder that we are credibly informed that in the city of Jeddo alone, there are no fewer than thirty-six thousand persons without sight.

From a work on Japan by M. Edouard Fraissinet, we learn that in that country there are two societies or brotherhoods, composed entirely of blind persons, the members of which have certain prescriptive rights

regarding the fulfilment of particular official offices connected with the social and religious customs of the people.

These blind brethren are very numerous, and are scattered all over the country,—their professional presence being indispensable at public festivals, religious and other processions, and also at marriages.

In taking part in processions, they walk in front, carrying wands to clear the way for the cavalcade; and it certainly is very singular that blind men should be employed to clear the road for the sighted, but there is little doubt that the fact of it being known that the wand-bearers are suffering from so heavy an affliction, exercises a softening influence on the crowds, and is a more efficient means of preserving order than would be produced by a number of mounted troopers. The members of the fraternities live by their profession, and they have their head-quarters and official officers.

The origin of these societies is somewhat singular, and we therefore give the following particulars taken from the source before named.

One of the fraternities owes its origin to a person named Senminar who, in his youth possessing great personal attractions, had the good fortune to be brought under the notice of a royal princess, who entertained for him such an ardent passion that she succeeded in making him her husband, Senminar, however, was not long permitted to enjoy the society of his royal bride. Death, that spares neither age nor rank, took her while yet young to his embrace. Senminar, overwhelmed with grief, was attacked with a severe illness, his life was spared, but he rose from the bed of sickness with one sense less. His sight was gone, and now in his blindness, the forlorn Japanese nobleman determined to devote the wealth bequeathed to him by her so fondly loved, to alleviate the misfortunes of those who not only shared with him the affliction of blindness, but who also had to en-

counter all the evils of biting poverty; he therefore, founded a brotherhood of blind men, which still bears his name.

The foundation of the second society to which reference has been made is equally romantic. Like the preceding case it occurred several centuries ago, and the following particulars may give some idea of its commencement.

Yoritomo, a Japanese prince, succeeded in making two neighbouring princes war with each other until both were exhausted, he then easily vanquished them, and seized on their possessions; he however spared Kakékigo, a feudatory, and an able defender of one of the deposed princes. Yoritomo also wished to attach Kakékigo to his person and plans, but the latter entertained so strong a regard for his former master, and such a hatred of Yoritomo, although he had spared his life, that he rejected all advances with stubborn determination. At length, however, feeling compunction for his treatment of his present benefactor, he sought Yoritomo, and thus addressed him,—"As I cannot look upon you without feeling a strong desire to revenge the wrongs of my prince, my former lord, by putting to death a conqueror from whom I have received great favours, receive these eyes which have caused me to wish you such evil; at least, I will not allow myself to be tempted to commit the unpardonable sin of ingratitude," and thereupon Kakékigo, tore out his own eyes, and presented them to Yoritomo, who was so overcome with admiration of the heroic act that he showered favours upon this devoted adherent.

Kakékigo, sympathizing in his affliction with the privations of others, imitated the example of Senminar, and founded a brotherhood of the same character as that established by his equally unfortunate predecessor; and in proof of his undying attachment to his first sovereign, called the name of the fraternity by the family appellation of that prince, viz. Feki; and it

is worthy of remark that the most distinguished nobles of Japan have always made their affliction a motive for alleviating the wants of their sightless brethren suffering from poverty.

AFRICA.

So little is known of the vast continent of Africa that we are unable to enter into particulars with regard to the various States or governments it contains, and must therefore content ourselves by offering a few general remarks, which are for the most part applicable to the whole of that division of the globe.

Africa, lying as it does between latitude 37° 20′ N. and 34° 50′ S., and longitude 17° 34′ W. and 51° 20′ E., and its surface being so largely occupied by immense deserts, of which it has been aptly said that their soil is fire, and their wind a flame; the sea-coasts, and the banks of the rivers consisting moreover, to a very large extent, of low unhealthy jungle,—it is no wonder that courageous travellers, who have adventured their lives in the cause of science, inform us that diseases of the eye are frightfully numerous. In Egypt, some writers think that the number of the blind is 1 in every 300 of the population, whereas others place it as high as 1 in 100, and in Morocco it is said that one in every hundred of the people is without sight. If, however, we take the lowest of the estimates given for Egypt, as that applicable to the entire continent, and if we accept the total population of Africa as 100,000,000, we find that on this division of the globe there are no fewer than 333,000 blind persons.

It is matter of surprise that neither the English of Cape Colony nor the French of Algeria have attempted to do anything for the blind of those colonies; and we earnestly recommend the consideration of the

subject to the devoted missionaries who labour for the well-being of the African races. Of course it is almost superfluous to say that nothing is done by the native rulers of Africa, but better things might fairly have been hoped of Egypt. It is, however, in that country at the present time, much as it was in the days of the Pharaohs, the rulers requiring the execution of great works, and driving the people to their labours with the stick.

But we suppose that as the blind are not considered capable of performing a daily task, they at least escape the bastinado. We believe that at Cairo there is a kind of almshouse where a number of indigent persons are assisted, and that those without sight form no inconsiderable portion of the inmates. This establishment is either maintained by the government, or by some Mahommedan community, but nothing of an educational, or industrial character has been attempted. Several years ago, some English missionaries caused a few passages of Scripture to be embossed in Arabic, with Mr. Freer's characters, but nothing permanent came of the undertaking. Attempts have also been made to teach the blind to do a little work, by plaiting rushes, etc., but with the same melancholy result. It is to be hoped, however, that this state of things will not last long, and that the improving Mussulman civilization of which we hear so much, may bear some fruit for the good of the sightless.

We find the following account of an African guide, without sight, in the 'Treatise on Enthusiasm,' by Meric Casaubon, D.D., published 1656, which we think it desirable to transcribe verbatim, prefacing, however, that the word Arabia is doubtless intended to mean the deserts of Africa, as they are often employed by old writers as synonymous terms :—

"Ioanes Leo, of Africa, a man for his fidelity, amongst the learned in the Eastern languages and

histories, of very good esteem, hath a strange relation of a blind man that was a guide to certain merchants travelling through the deserts of Arabia. The man rode upon a camel, and led his company, not by his eyes, which he had not, but by his smell, which was so exquisite, that having been acquainted with those ways before, he could find by the scent of the very earth, nay, of the sand (which was reached unto him at every mile), where he was, and would describe the places unto them as they went along; yea, told them long before (which proved true, though not believed then), when they drew near to inhabited places." (Quoted from Descript. Africa, lib. vi. p. 246.)

AMERICA.

The United States.

When the census of the above States was taken in 1861, the total population amounted to 31,445,080, and the number of the blind to 12,635, or 1 in every 2,489 of the inhabitants; and here it may be observed that the proportion of the blind to the general population appears to be less in the United States than in any other country. As the population of the Union is now about 40,000,000, it is probable that the number of the blind is above 16,000.

About the year 1832 three institutions for the education of the blind started almost simultaneously into existence in the United States. These were established respectively at Boston, Philadelphia, and New York. Each in its turn has claimed precedence, but the matter seems surrounded by so many questions connected with first experiments, and permanent openings, that it is quite impossible to arrive at the truth; this, however, is certain, that the subject of alleviating the misfortunes of the blind occupied the attention of

several benevolent persons at the same time, and that this resulted in the establishment of the institutions above named.

Mr. Perkins, a wealthy citizen of Boston, having bequeathed a large sum of money, and his mansion, for the establishment of an asylum for the blind, entrusted the management of the undertaking to Dr. Samuel Gridley Howe. This benevolent physician, having spent seven of the best years of his life in fighting for the independence of Greece, and in saving thousands of the people of that unhappy country from death by starvation, wounds, and disease, returned to his native land, and threw all the force of his strong and generous nature into the enterprise of elevating the sightless from the state of wretchedness and degradation in which he found them.

His first experiments were with six poor children, one of whom sold fish in the streets, and the success was so gratifying, that the Perkins Institution and Massachusetts Asylum for the Blind, soon received the patronage of the Legislature, and an annual grant from the State funds.

This establishment is superintended by a body of trustees, who make an annual report of their proceedings. The indigent blind of Massachusetts are received gratuitously. Those from the States of Connecticut, Maine, Vermont, and New Hampshire are admitted by a warrant from the State to which they respectively belong, or failing that, must find security among their friends to the extent of about £20 for their first year's board and instruction, and £10 for the second. After the first year, a current account is opened with each pupil. He is charged with the actual cost of his board, which does not exceed two dollars per week, and he is still credited with the amount paid for him by the State, or by his friends, also with his earnings over and above the cost of the materials which he uses; and the result of this plan is, that all the pupil's earnings over one dollar per week are his own.

By the third year it is known whether his earnings are more than pay the actual cost of his board; and if so, he has it at his option to remain and receive his earnings or not. Those who prove unable to earn their own livelihood are not retained. This arrangement seems peculiar to the Boston institution, and its merits, as compared with the management of other American establishments, have not shown themselves sufficient to deserve imitation.

The industrial department has not advanced in accordance with the expectations of the founders, and we believe that there are at present only thirty inmates of the workshops. The plan, however, was well intentioned, and doubtless owes its ill-success to its compelling the blind to rely entirely on their own industry, without any additional pecuniary aid. Besides the inmates of the workshops, there are about eighty pupils in the school, and what has been done at that establishment in the production of embossed books we have already seen in the article on printing for the blind. The same year that saw the establishment of the Massachusetts asylum witnessed also the opening at Philadelphia of the Pennsylvania Institution, which has ever since held a high place among the schools of Europe and America.

As we have already said, the institution at New York was founded about the same time as those above named, and we may now add that it is at present the largest in the United States, and is, in point of magnitude, the rival of those of Paris, and St. George's Fields, London.

It is much to the honour of the American people that every blind person who needs instruction can have it by simply making his wish known, and that all that the parents of any blind child have to do to procure board, lodging, clothes, mental and religious culture, and instruction in a profession or trade, for their sightless offspring, is to present the child to

the proper officer, who forthwith causes him to be supplied with these inestimable advantages at the public cost.

Without any exception, laws have been passed in every State of the Union providing the foregoing benefits for those of its citizens who are without sight; and where the legislature of any State does not possess an institution of its own, it contracts with a neighbouring State to take its blind at a fixed rate of payment.

The following list of States now having institutions for the blind, with the date of formation, and number of inmates of each establishment has been compiled, from various sources, and we are sure will be perused with interest:—

Date of Foundation.	Location.	Present Number of Inmates.
1828 or 1832	Massachusetts, at Boston	155
1832	New York, at New York	200
1845	New York, at Batavia.	74
1833	Pennsylvania, at Philadelphia . .	185
1837	Ohio, at Columbus	160
1838	Virginia, at Staunton	35
1842	Kentucky, at Louisville	65
1844	Tennessee, at Nashville	30
1846	Indiana, at Indianopolis	102
1848	Illinois, at Jacksonville	78
1848	Mississippi, at Jackson	21
1848	North Carolina, at Raleigh . . .	21
1849	Wisconsin, at Jamesville	69
1849	South Carolina, at Cedar Springs .	10

Date of Foundation.	Location.	Present Number of Inmates.
1851	Missouri, at St. Louis	67
1852	Georgia, at Macon	38
1853	Iowa, at Iowa City	50
1853	Louisiana, at Baton Rouge . . .	15
1854	Maryland, at Baltimore	41
1854	Michigan, at Flint	22
	District of Columbia, at Washington	6
1856	Texas, at Austin.	12
1857	Arkansas, at Little Rock	28
1857	Alabama	
1859	California, at San Francisco . . .	31
1862	Minnesota, at Fariboult	4
1867	Kansas, at Wyandotte.	20

The total number of the institutions is 27, and that of the inmates 1539, of whom 1397 are pupils, and 142 workpeople, who are employed in workshops at the following places, viz.:—

Boston	30
New York	60
Philadelphia	45
Illinois	4
Missouri	3

In the various American establishments the two sexes occupy adjoining buildings, and no uniform or badge of charity is worn by the pupils. Although, as we have before said, the indigent blind of the United States are gratuitously supplied with an intellectual and industrial training, and are also maintained for a given number of years without charge, yet the pupils whose friends have sufficient means pay in full for the benefits received; they are admitted into the same in-

stitutions as the indigent blind, a sum being paid for each person of about £40 per annum. The institutions for the blind are also largely benefited by legacies and annual contributions from private individuals; but their chief reliance is upon governmental grants. It is not at all to the credit of England that, while the Americans consider that the misfortunes of the blind entitle them to greater aid from the State than is accorded to ordinary members of the community, the English Government seems to look on the privations of the sightless as a special reason why nothing should be done for them. We hope, however, that this reproach may soon be taken away from our country, and that the spirit of the Gospel on which it is professed that its laws are based, may really become the governing principle of its legislation. The education in the American schools consists in the study of English literature, the mathematics, natural philosophy, and music, and also instruction in various handicraft trades; and it is a noteworthy feature that blind teachers are often employed.

Books are printed in relief at Boston, Philadelphia; Richmond, Virginia; Louisville, Kentucky; and at St. Louis, Missouri. At the last-named place Braille's type is used, but in all the other institutions some modification of the English or Roman type is employed, and for a full description of these systems the reader is referred to the article in this volume on printing for the blind.

The methods of writing with pin-type and with the pencil are in general use, and the arithmetical board with square holes and two pegs is common. Howe's maps and diagrams, and the systems of embossed music known respectively as those of Braille and Mahony, have their partisans, and the common mode of musical notation is adopted at Philadelphia, and some other places.

For a full description of the educational appliances above named, the reader is referred to the articles in

this book specially devoted to writing, arithmetic, geography, music, etc. But we may here state that some years ago, Dr. Howe introduced for the benefit of the students of phrenology, models of heads, the various parts of which were represented by embossed letters and figures which corresponded with those given in the explanations which were printed in relief. Music is much cultivated as a means of livelihood in the United States; but blind organists do not seem to meet with much encouragement. String bands exist in several of the institutions, but their utility is very doubtful. Pianists without sight are not uncommon, but the tuning of the pianoforte seems to be the most lucrative branch of the profession.

The handicrafts usually carried on include the manufactures of baskets, mats, matting, cane-work, bead-work, and knitting. Mattresses are also made to some extent, and the making of brushes and whisk brooms is largely carried on, especially at Philadelphia. In the education of the juvenile blind the Americans may be said to have thoroughly succeeded, but in caring for adults they are lamentably deficient. The books in use cannot be read by adults; those who are able and willing to work are unable to obtain it, and there are scarcely any pensions for the aged and infirm. A Bible capable of being read by all classes of the blind, constant and remunerative employment to males and females at their own homes, and pensions to the helpless, are the most pressing wants of the citizens of the United States who are without sight; and considering the great liberality already shown in providing for the education of blind children, can we doubt that these requisites will long be wanting, especially as without them what has already been done is often productive of more evil than good? Mr. Chappin, the principal of the Pennsylvania Institution, Philadelphia, has for some time shown such an enlightened appreciation of this subject that we feel convinced his representations

will not be long unheeded, but that his countrymen will soon crown their noble efforts for the welfare of the blind by enabling him fully to carry out his benevolent designs.

BRITISH NORTH AMERICA.

Of the number of the blind inhabitants of the vast countries included in the above title no authentic returns exist, it is however known that in Newfoundland 1 in every 1426 of the people is without sight, in Nova Scotia one in every 1788, and in Prince Edward's Island one in every 1880. If we take the average of these three returns, viz. 1698, and accept the total population as 2,663,000, we shall find that the number of persons without sight in British North America amounts to 1568.

The extreme northern latitudes occupied by the greater part of these territories greatly increase the tendency to blindness, as long-continued snow and cold winds are most injurious to the eyes. This evil, however, has not yet strikingly shown itself in the dominion of Canada and the adjacent countries, on account of the constant influx of settlers from Europe, which prevents the tendencies of the native population from manifesting themselves in full force, but even as it is, the influence of the northern climate is shown by the circumstance that there are about three blind persons in British North America to every two in the adjoining United States.

In Canada there is a college or institution for the blind at Montreal, and another at Toronto, each of which receives a grant from the Colonial Government of 1000 dollars, or £208. 6*s*. 8*d*. per annum. It is believed that the instruction in these schools is similar to that of the institutions of the United States, and that

the total number of pupils does not amount to a hundred. In 1870, the erection of a building to be used as an asylum for the blind was commenced at Halifax, Nova Scotia, the expense being entirely borne by a benevolent gentleman of that city, and it is believed that the institution is now in full working order.

MEXICO.

To expect any authentic returns of the number of the blind in this unhappy country would almost appear as absurd as to indulge the hope that there would ever be anything else recorded of the history of the republic than a catalogue of robberies and murders; and we must therefore content ourselves by stating that the total population of the country is estimated at 7,200,000, and that it is probable that the ratio of the blind is about 1 in 1500, which makes it likely that there are about 4800 persons without sight in the various States forming the Mexican republic.

During the short and troubled reign of the Emperor Maximilian an inquiry was set on foot in the name of the unfortunate Empress Charlotte, into the working of various institutions in Europe, with a view of establishing schools for the benefit of the blind in Mexico. This enterprise, however, like many others of a more ambitious character, came to an end with the untimely death of Maximilian, and the distressing mental affliction of the Empress, and as far as we know, it is the only attempt ever made to do anything for the sightless inhabitants of the most Catholic and lawless country of modern times.

THE WEST INDIES.

There are no authentic returns of the number of

persons without sight in the numerous islands comprised in the above designation. But there are some data of considerable value, from which an approximate idea may be obtained.

It has been estimated by local authorities that the proportion of the blind to the general population is in the different islands as follows :—

Antigua and Bermuda, 1 in every 386; Tortola, 1 in 756; Barbadoes, 1 in 883; Tobago, 1 in 700; and Jamaica, 1 in 358.

If from these figures we extract the general average, viz. 1 blind person in every 616 of the inhabitants, and accept the total population of the West Indies as 3,855,000, we find that the total number of the blind amounts to 6258.

We believe that there is no provision of any kind made in the West Indies for those who have the misfortune to be without sight; but it is to be hoped that although England, France, Spain, Holland, Denmark, and Sweden have long neglected their duty in this respect, yet that when some of the islands pass into the hands of the United States (as doubtless they very soon will), the Americans will introduce the blessings of their school system, and that the example may be followed by the professed European champions of civilization, unless in the meantime Britain (in anxiety to repair the evils of duty long neglected) rouse herself to do something for her poor sightless West Indian subjects, and thus take the lead in the noble work.

CENTRAL AND SOUTH AMERICA.

Of the number of the blind in the vast territories included in the above title, the only means of arriving at a conclusion are the slender data presented by the geographical position, and the physical structure of

the countries. Under these circumstances, we think it may be assumed that the proportion which the number of the blind bears to the general population may be taken for the whole of Central and South America as 1 in 800; and if the total population is accepted as being 20,000,000, the persons without sight cannot be fewer than 25,000.

For the relief of the mass of suffering and distress represented by these figures, only one institution exists, which was commenced at Rio de Janeiro, in 1854. The foundation of this establishment is entirely due to the unceasing exertions of a blind gentleman, named José Alveres de Alevedo, who, having gone to Paris, and been educated at L'Institution des Aveugles, on returning to his native land laboured for three years in endeavouring to obtain influential patronage for the establishment of a school for the blind. At length his exertions were rewarded; and he having obtained an audience with the Emperor of Brazil, his Majesty made use of these memorable words: "The blind shall not henceforth be outcasts." The result of this interview was, that a sum of £2000 was voted by the government for the foundation of the Imperial Institution for the Blind in Brazil. Gratifying as this circumstance must have been to Alveres, he was not permitted to witness the full success of his plans. His untiring exertions in the cause of the blind had so injured his health that he died in March, 1854, only six months before the institution was opened. His memory is held in grateful respect by the blind of Rio de Janeiro, and at the opening of the school an elegy was delivered in his honour.

The institution at Rio de Janeiro is formed on the Paris model; Braille's system of reading and writing, and other French methods being employed. The number of inmates is about thirty, and if his Imperial Majesty of Brazil intends to carry out his declaration that the blind of his dominion shall not be outcasts,

truly he has enough yet to do before such a desirable end be reached.

AUSTRALASIA AND POLYNESIA.

If we estimate the total population of the numerous islands included in the above heading at 3,000,000, and assume that the average proportion of the blind is 1 in 800, we shall find that the total number of persons without sight amounts to 3750.

In many parts of Australia the inhabitants are particularly liable to diseases of the eyes, caused by the frequent sand showers which prevail when the wind blows from the interior of the country. These showers are not only directly injurious to sight, by penetrating and injuring the organs of vision, but they also produce a kind of epidemic, which causes one person afflicted with eye disease to be the means of transmitting the contagion to others, and in consequence we find that blindness is unusually frequent in the Australian colonies. Cases are by no means rare in which persons who have gone to the southern hemisphere to seek gold, have returned to England in a few months hopelessly blind; and we are credibly informed that in a day-school in Victoria several children have been known to lose their sight in a single morning. Sightless mendicants are very numerous in Australia, and at Sydney blind vendors of newspapers are common in the streets.

About the year 1863, a school for persons without sight was opened at Melbourne, with which enterprise we believe a blind lady had much to do. In 1868 a commodious building was erected for the accommodation of the pupils, who were then thirty in number, and it may be mentioned that reading on the plans of Lucas and Moon is practised, and that basket-making and knitting are also taught.

At Sydney, in 1869, a department for the education of the blind was commenced at the institution for the deaf and dumb established in that city nine years earlier. This school now contains seven blind pupils, including girls and boys, No adults are admitted, but the institution is open to the indigent blind children of New South Wales, provided their parents supply them with clothes. The friends of the pupils who are able, pay £20 per annum for children under seven years, and £25 for those above that age. The blind are also admitted on similar terms from the neighbouring Australian colonies, and from New Zealand. Persons of all sects are admitted to the institution, and the wishes of the parents of the pupils with regard to their religious training seem to be strictly carried out. Only the elementary branches of education, viz. reading, writing, and arithmetic have as yet been introduced, but no doubt the practice of music and instruction in simple handicraft trades will soon be added; and it is hoped that this advance will be followed by higher intellectual culture and a development of the institution to meet the wants of blind adults, who in the colony, it is probable, are twenty to one as compared with children. A blind assistant teacher is employed, and the systems of reading in use are those of Moon and Lucas; and here it may be mentioned that in addition to the seven blind inmates, there are thirty-three deaf and dumb. An annual grant of £450 is received from the legislature of New South Wales, and the governor of the colony is the patron of the institution. It is also believed that the provincial parliament has just voted a sum of £2000, and assigned five acres of land near Sydney as a site for a new institution, and the public contributions for this special object amounted in 1870 to more than £1300, including a donation of £100 from the Earl of Belmore, the governor of the colony. The first stone of this building was to have been laid in 1870, and it is probable that the under-

taking is now rapidly advancing toward completion. During the past year the donations and subscriptions from benevolent individuals for the ordinary purposes of the establishment amounted to £556. 17*s*. 6*d*., while a sum of £132. 14*s*. 4*d*. was received as fees for pupils.

The United Kingdom of Great Britain and Ireland.

England and Wales.

According to the census of 1861, the total number of the blind in England and Wales was 19,352, being a ratio of one in every 1037 of the population.

As compared with the previous census, the proportion of persons without sight had somewhat decreased, for in 1851 it was one in every 979. Owing, however, to the increase of population, a considerable addition was also made to the number of the blind.

The following Table will give some idea of the inequalities that exist between the ages of persons afflicted with blindness and the general population of England and Wales; and will also show how powerfully the increase of years tends to produce loss of sight.

Blind. Blind in England and Wales, 19,352.		*General Population.* Total population in England and Wales, 20,066,224.
Under 20 years of age	2,702, or 13 per cent. . .	9,082,666, or about 45½ per cent.
Between 20 and 40 years of age . .	3,348, or 17 per cent. . .	6,009,977, or about 30 per cent.
Between 40 and 60 years of age . .	4,504, or 23 per cent. . .	3,485,534, or about 17 per cent.
Between 60 and 80 years of age . .	6,752, or about 35 per cent.	1,374,797, or about 7 per cent.
80 years of age and upwards . . .	2,046, or about 10½ per cent.	113,250, about ½ per cent.

Ages of Males and Females returned as Blind in England and Wales at the Census of 1861.

	Males.	Females.
Under 5 years	293	236
„ 10 „	326	274
„ 15 „	443	327
„ 20 „	455	348
„ 25 „	449	361
„ 30 „	487	321
„ 35 „	556	338
„ 40 „	501	335
„ 45 „	686	428
„ 50 „	637	408
„ 55 „	621	496
„ 60 „	670	558
„ 65 „	817	754
„ 70 „	794	847
„ 75 „	903	938
„ 80 „	771	928
„ 85 „	519	728
„ 90 „	251	336
„ 95 „	54	115
„ 100 „	14	23
Under 100 years and upwards	2	4
Total	10,249	9,103

The following Table will show the number of persons without sight in various districts of the Metropolis, the institutions existing in London for the education and employment of the Blind, and the number of persons assisted by such establishments :—

MIDDLESEX (Part of).

District or Union.	Number of the Blind.	Number of Institutions.	Number of Persons Assisted.
Kensington . . .	148		
Chelsea	63		
St. George, Hanover Square	50		
Westminster . . .	53		
St. Martin-in-the-Fields	18		
St. James, Westminst.	31		
Marylebone . . .	144		
Hampstead . . .	64	1	54
St. Pancras . . .	193	1	112
Islington	120		
Hackney	68		
St. Giles	48	1	55
Strand	36		
Holborn	35		
Clerkenwell . . .	65		
St. Luke	49		
East London Union.	34		
West London Union	25		
London City Union.	45		
Shoreditch . . .	108		
Bethnal Green . .	86		
Whitechapel . . .	101		
St. George-in-the-East	55		
Stepney	45		
Mile-End Old Town	54		
Poplar	55		

Surrey (Part of).

District or Union.	Number of the Blind.	Number of Institutions.	Number of Persons Assisted.
St. Saviour, Southwark	30		
St. Olave, Southwark	17		
Bermondsey	51		
St. George, Southwark	225	1	160
Newington	70		
Lambeth	150		
Wandsworth	58		
Camberwell	74	1	12
Rotherhithe	20		

Kent (Part of).

District or Union.	Number of the Blind.	Number of Institutions.	Number of Persons Assisted.
Greenwich	118		
Lewisham	32		
Total	2,638	5	393

Note.—It is to be observed that the blind persons receiving instruction and employment in the foregoing institutions are taken from various parts of the kingdom; and in the case of the Association for Promoting the General Welfare of the Blind, many of them live at their own homes in the country, so that the number of persons said to be assisted in the preceding Table does not represent the Blind of London who are benefited, but simply shows how many persons are connected with the Metropolitan institutions.

The following Tables will show the relative numbers of the Blind in the various counties of England and Wales, the institutions that exist for the education and employment of persons without sight, and the number of persons assisted by such establishments.

SOUTH-EASTERN COUNTIES.

Counties.	Number of the Blind.	Number of Institutions.	Number of Persons Assisted.
Surrey (Extra Metropolitan)	189		
Kent (Extra Metropolitan)	452	1	6
Sussex	335	1	64
Hampshire	401	1	23
Berkshire	212		
Total	1589	3	93

SOUTH MIDLAND COUNTIES.

Counties.	Number of the Blind.	Number of Institutions.	Number of Persons Assisted.
Middlesex (Extra Metropolitan) . . .	196		
Hertfordshire . . .	200		
Buckinghamshire . .	140		
Oxfordshire	159		
Northamptonshire. .	220		
Huntingdonshire . .	49		
Bedfordshire . . .	106		
Cambridgeshire . .	161		
Total	1231	Nil.	Nil.

Eastern Counties.

Counties.	Number of the Blind.	Number of Institutions.	Number of Persons Assisted.
Essex	341		
Suffolk	374	1	
Norfolk	552	1	36
Total	1267	2	36

South-Western Counties.

Counties.	Number of the Blind.	Number of Institutions.	Number of Persons Assisted.
Wiltshire	276		
Dorsetshire	209		
Devonshire	771	3	107
Cornwall	503		
Somersetshire . . .	555	2	65
Total	2314	5	172

West Midland Counties.

Counties.	Number of the Blind.	Number of Institutions.	Number of Persons Assisted.
Gloucestershire . .	591	1	25
Herefordshire . . .	154		
Shropshire	295		
Staffordshire . . .	700		
Worcestershire . .	329	2	30
Warwickshire . . .	470	1	60
Total	2539	4	115

Note.—The College for Blind Sons of Gentlemen, at Worcester, which has 15 students, is included in this Table.

North Midland Counties.

Counties.	Number of the Blind.	Number of Institutions.	Number of Persons Assisted.
Leicestershire . . .	244	1	16
Rutlandshire . . .	17		
Lincolnshire . . .	388		
Nottinghamshire . .	360	1	61
Derbyshire	249		
Total	1258	2	77

North-Western Counties.

Counties.	Number of the Blind.	Number of Institutions.	Number of Persons Assisted.
Cheshire	391	1	18
Lancashire	1952	6	296
Total	2343	7	314

Yorkshire.

Registration Ridings.	Number of the Blind.	Number of Institutions.	Number of Persons Assisted.
West Riding . . .	1181	3	72
East Riding . : .	329	1	74
North Riding . . .	248		
Total	1758	4	146

Northern Counties.

Counties.	Number of the Blind.	Number of Institutions.	Number of Persons Assisted.
Durham	433		
Northumberland . .	347	1	44
Cumberland . . .	198		
Westmoreland . .	38		
Total . . .	1016	1	44

Monmouthshire and Wales.

Registration Limits.	Number of the Blind.	Number of Institutions.	Number of Persons Assisted.
Monmouthshire . .	210		
South Wales . . .	716	2	23
North Wales . . .	473		
Total . . .	1399	2	23

Islands in the British Seas.

Islands.	Number of the Blind.	Number of Institutions.	Number of Persons Assisted.
Isle of Man . . .	69		
Isle of Jersey . . .	72		
Isle of Guernsey and adjacent Islands .	56		
Total . . .	197	Nil.	Nil.

The various charitable efforts now being made for the benefit of the Blind may be divided into four classes, namely,—

No. 1. For providing them with education.
2. For employing them in industrial occupations.
3. For granting pensions, and
4. For the furtherance of efforts of a missionary character.

The first institution in this country for imparting to persons without sight a religious and mental training, and for instructing them in industrial occupations, was founded at Liverpool in 1791, and there are now in England and Wales eighteen establishments of a similar kind, of which the following tabular statement will give some useful information :—

Date of Foundation.	Name and Location of Institution.	Number of Inmates.
1791	School for the Indigent Blind, Hardman Street, Liverpool . .	70
1793	Bristol Asylum, or School of Industry for the Blind	52
1799	School for the Indigent Blind, St. George's Fields, Southwark, London	160
1800	Norwich Institution for the Indigent Blind	36
1833	Yorkshire School for the Blind, York	74
1838	London Society for teaching the Blind to Read, and for training them in industrial occupations, Avenue Road, Regent's Park, London	54
1838	Royal Victoria Asylum for the Industrious Blind, Newcastle-u-T.	44

Training Institutions—continued.

Date of Foundation.	Name and Location of Institution.	Number of Inmates.
1839	Henshaw's Blind Asylum, Manchester	85
1839	West of England Institution for the Instruction and Employment of the Blind, Exeter . .	59
1841	Catholic Blind Asylum, Liverpool	42
1842	Institution for the Blind and Deaf and Dumb, Bath	13
1842	Asylum for the Blind, Brighton .	64
1843	Institution for the Blind, Nottingham	61
1846	General Institution for the Blind, Birmingham	60
1860	South Devon and Cornwall Institution for the Employment and Instruction of the Blind, Plymouth	36
1861	Blind School, Canterbury, about	6
1864	Hampshire and Isle of Wight School for the Blind, Southsea.	23
1866	Hastings Society for the Instruction and Relief of the Blind .	7
1870	Ipswich School for the Blind . .	—
	Total number of institutions 19	
	Total number of inmates . .	946

The foregoing institutions are all connected with the English Church, with the exception of the Roman Catholic school at Liverpool, but no exclusion exists on account of creed. In general, persons are only admitted from certain localities, specified in the title of

the institution; but in some instances, such as those of St. George's, London; St. John's Wood, London; Bristol, Liverpool, Birmingham, etc., the pupils are taken from any part of the United Kingdom. The schools for the Blind are chiefly maintained by charitable donations, annual subscriptions, and legacies, and in general the friends or parishes of the pupils pay about ten pounds per annum towards their maintenance. There is, however, one noble exception, namely, that of the School for the Indigent Blind, St. George's Fields, London, which society boards, clothes, and educates 160 blind persons entirely without cost to their friends for a period of six years.

There may be differences of opinion as to the way in which institutions for the sightless should be managed, but there can be none as to the merit of relieving the distresses of the unfortunate in the free manner above described.

In some instances, such as that of the school at St. John's Wood, London, a small proportion of the pupils are admitted without payment, but these are exceptions to the general rule.

The education given in the foregoing schools consists in affording to the pupils religious training and a knowledge of reading, writing, arithmetic, history, geography, and music; also in imparting to the inmates instruction in the industrial arts of basket-making, brush-making, mat and matting-making, knitting, and netting. In some institutions all these departments of instruction are fairly carried out, but in general one special object is prosecuted to the neglect of others. For instance, the institutions that pay considerable attention to intellectual culture frequently fall short in industrial training, and those which devote themselves to industrial employments often neglect intellectual education; and here we are bound to say that, as a rule, the instruction given in these establishments is not such as the Blind require, which chiefly arises from want of any settled system of educa-

tion, and from the absence of trained teachers. On this subject much could be said, but circumstances compel us not to enter more fully into the matter at present; we may, however, observe that for remarks on the education of the Blind, and the principles on which such education should be conducted, the reader is referred to the articles in this book which treat of the senses, the training of blind children, and the instructors of the Blind, etc. The industrial institutions for the Blind may be considered as those whose chief objects are to supply work to men and women who have learnt a trade, and to teach industrial arts to those of the sightless who are too old for admission into educational establishments.

The first institution of this kind that existed in England was commenced in London in 1854, by Miss Gilbert, daughter of the late Bishop of Chichester. That lady nobly supported the institution for two years at her own cost, and in 1856 breadth was given to the enterprise by the formation of a society entitled the Association for Promoting the General Welfare of the Blind, which Miss Gilbert endowed with the sum of £2000; and we shall now proceed to give a Table, showing the number and position of the industrial institutions for the Blind in England and Wales.

Date of Foundation.	Name and Location of Institution.	No. of Persons employed
1854–56	Association for Promoting the General Welfare of the Blind, Euston Rd. and Oxford St., London	112
1857	Surrey Association for the General Welfare of the Blind, Peckham	12
1858	Cheltenham and Gloucestershire Home Teaching and Industrial Society for the Blind, Cheltenham	25

Date of Foundation.	Name and Location of Institution.	No. of Persons employed
1859	Leicester Association for Promoting the General Welfare of the Blind, High Street, Leicester .	16
1860	Devonport and Western Counties Association for Promoting the General Welfare of the Blind .	12
1860	North of England Manufactory for the Blind, Sheffield	20
1861	Liverpool Workshops for the Blind	70
1862	Bradford Association for Improving the Social Condition of the Blind	37
1863	Alexandra Institution for the Blind, London	55
1865	Cardiff Association for Improving the Social Condition of the Blind	14
1866	Leeds Institution for the Indigent and Industrious Blind . . .	15
1866	Stockport Institution for the Blind, the Deaf, and the Dumb	16
1867	Bolton Schools and Workshops for the Blind	20
1867	Preston Industrial Institution for the Blind	9
1868	Swansea Society for Teaching the Blind and improving their Social Condition	9
1869	Newtown Industrial Institution for the Poor Blind, Worcester . .	15
	Total number of institutions 16	—
	Total number of persons employed	457

VARIOUS PARTICULARS RESPECTING CHARITIES FOR AFFORDING PENSIONS TO THE BLIND.

As early as the year 1718, a gentleman named West gave a sum of money to the Clothworkers' Company, for the establishment of permanent annuities to blind persons whose age and condition fulfil the requirements laid down by the donor. This excellent example has from time to time been followed by many benevolent individuals, who have endowed charities and established societies for a like object.

It is somewhat singular that London is the only place in which such charities have been founded, and this is true not only of the United Kingdom, but also of the whole world, so that in this respect, as in many others, the lines on the metropolis by a poet, whose name we forget, may be quoted with truth, viz. :—

> "Though, London, thou hast many faults,
> No city ranks above thee,
> And when with fond admiring eyes
> I look upon thy charities,
> I cannot choose but love thee."

As information connected with this subject cannot fail to be of interest to the Blind and their friends, we subjoin the following Table, which will give some idea of the history and operations of the various endowments and societies that exist for giving annuities to the Blind :—

Date of foundation.	Name of Charity and where located.	Amount of Pension per Annum.	Age and other qualifications.	Persons Assisted.
1718	West's, Clothworkers' Hall, 41, Mincing Lane, E.C. . . .	£ s. 5 0	Must be not less than 50 years of age, 3 years blind, have an income of less than £20 per annum, not an inmate of a workhouse, or public institution, and must not solicit alms.	420
1774	Hetherington's, Christ's Hospital, Newgate Street, E.C. .	10 0	61 years, must be natives of England and Wales, and not in receipt of more than £20 per annum, with other stringent regulations.	693
1810	Newman's, Clothworkers' Hall, 41, Mincing Lane, E.C. . .	10 0	Must be not less than 50 years of age, 3 years blind, have an income of less than £20 per annum, not an inmate of a workhouse or public institution, and must not solicit alms. .	32
1813	Rachael Farmer's, Goldsmiths' Hall, Foster Lane, E.C. . .	4 0	21 years. A resident in the county of Middlesex, must be freemen, or widows of freemen, with not more income than £25 per annum.	10
1820	Institution for the Relief of Indigent Blind Jews, 37, Duke Street, Aldgate, E.C. . . .	20 16	. . . . .	44
1835	Thwaytes's, Clothworkers' Hall, 41, Mincing Lane, E.C. . .	10 0	Must be not less than 50 years of age, 3 years blind, have an income of less than £20 per annum, not an inmate of a workhouse or public institution, and must not solicit alms.	75
1837	Hannah Acton's, Clothworkers' Hall, 41, Mincing Lane, E.C.	10 0	Ditto	4
1839	The Blind Man's Friend, 34, Savile Row, W.	£12 £16 and £20	Must reside in Great Britain	237. Income £4000 per An.
1843	Christian Blind Relief Society, 100, Borough Road, and London Coffee House, Ludgate Hill	From 30s. to £6	Members of Christian churches have precedence. Income £800 per annum	200
1845	Gregory's, Clothworkers' Hall, 41, Mincing Lane, E.C. . .	4 0	Must be not less than 50 years of age, 3 years blind, have an income of less than £20 per annum, not an inmate of a workhouse or public institution, and must not solicit alms . .	1

Date of foundation.	Name of Charity and where located.	Amount of Pensions per Annum.	Age and other qualifications.	Persons Assisted.
1850	Cornell's, Clothworkers' Hall, 41, Mincing Lane, E.C. . .	£ s. 10 0	Must be not less than 50 years of age, 3 years blind, have an income of less than £20 per annum, not an inmate of a workhouse or public institution, and must not solicit alms .	7
1854	Association for Promoting the General Welfare of the Blind, 210, Oxford Street, W.; 125, 127, Euston Road, N.W. . .	From £5 to £15 12s.	Inability to earn their own living when work is found	16
1855	Goldsmiths' Company, Goldsmiths' Hall, Foster Lane, E.C.	4 0	21 years a resident in the county of Middlesex, must be freemen or widows of freemen, with not more income than £25 per annum	13
			Ditto	6
1859	Cureton's, Goldsmiths' Hall, Foster Lane, E.C.	20 0		
1859	Love's, Clothworkers' Hall, 41, Mincing Lane, E.C. . . .	10 0	Must be not less than 50 years of age, 3 years blind, have an income of less than £20 per annum, not an inmate of a workhouse or public institution, and must not solicit alms.	1
1863	Protestant Blind Relief Society, 12, Wellington Street, London Bridge, E.C.	3 0	Must be a member of a Protestant church .	150
	Stock's, Painters' Hall, 9, Little Trinity Lane, E.C. . .	10 0	61 years; apply between October 6th and November 25th	30
	Cames's, Cordwainers' Hall, 43, Cannon Street West, E.C. .	5 0	Men must be 46, and women 40 years of age, pensioners must not have parish relief, and must reside within 100 miles of London.	
	Granger's, Drapers' Hall, 27, Throgmorton Street, E.C. .	10 0		
	Humston's, Vestry Hall, St. Botolph's, Aldgate	6 0	For parishioners of St. Botolph and St. Paul's, Shadwell.	
	Miss Horley's, Messrs. Harrison and Beale, 19, Bedford Row	20 0	Must be communicants of the Church of England	8

ON THE BLIND CONNECTED WITH BEGGING.

Blindness and begging appear so intimately connected with each other that in the minds of many persons the existence of the former seems to indicate the presence of the latter. How this has come about it is not difficult to determine.

Loss of sight generally reduces those afflicted by it to a state of helpless dependence, and this deplorable result is unavoidable, unless the necessary means for the amelioration of the condition of the Blind be provided by enlightened Christian benevolence, so that they may be enabled to rely as far as possible on their own exertions for the means of subsistence, and the attainment of happiness. Accordingly we find that from the earliest period the mass of the Blind have maintained themselves by seeking alms by the roadside. It would even appear that the great Homer himself was a mendicant; and the blind, who sat by the highway side begging, were among the most frequent participators of the Saviour's mercy.

Belisarius, a Grecian general of the sixth century, is said to have begged his bread in the streets of Constantinople, after having been blinded as a punishment; and although the accuracy of the tradition is doubtful, yet it shows the intimate connection that existed at that time between begging and blindness. In the middle ages when it was common in the East to put out the eyes of prisoners taken in battle, and when the Western nations were suffering from the dreadful scourge of ophthalmia, contracted in the wars of the Crusades, blindness seems to have reached its greatest development, and the streets of every city and the country bye-ways were encumbered by ever-imploring sightless dependants. The first organized attempt to grapple with this gigantic evil was made by Louis IX., or St. Louis of France, who in 1260 established the institution of the Quinze-

vingts, for the reception and maintenance of three hundred blind men and women. This establishment still exists, and is one of the greatest glories of Paris. At the present day in France, and some other countries, the blind are permitted to beg without let or hindrance, while other mendicants are prohibited from so doing. In England, however, the sightless have no such favour extended to them; and although the rigour of the law is greatly tempered by the humanity of the officers of police, yet very many blind persons are committed to prison whose only crime consists in their preferring to trust to the sympathy of casual passers-by, instead of being shut up in workhouses with companions, who are among the most depraved of mankind. One of the most profitable means the blind itinerant has of obtaining assistance is the playing on a violin, or other musical instrument, and the feelings of a person so circumstanced are well set forth in the following lines by W. F. Collard :—

THE WANDERING MINSTREL.

I.

"A wand'ring minstrel poor and blind,
A child of sorrow and forlorn,
Beneath your roof, O lady kind,
Protection begs until the morn.
O bid him welcome and his lay
A grateful tribute shall repay.

II.

"A weary pilgrimage he treads,
Expos'd to danger, want, and scorn;
And pity, in his favour, pleads
For kind protection till the morn.
Ah! bid him welcome, and his lay
A grateful tribute shall repay.

III.

"And when the golden dawn shall rise,
By him, alas! no longer view'd,
His morning hymn shall greet the skies
Upon the wings of gratitude.
Then bid him welcome, and his lay
Shall strive your kindness to repay."

Many mendicants sell, or pretend to sell, small articles, such as boot-laces, which they probably do to avoid being interfered with by the police. Some read from embossed books, and others sing about the streets in gangs, and here it is to be observed that these partnerships are often made through the attendance at classes formed in London and other places, with the object of imparting religious instruction. At many of these classes men and women meet together; and this often leads to blind men, who beg in the streets for their living, marrying blind women, which eventually causes both husband and wife, and too frequently a number of young children, to be found begging by the way-side. Many persons who never had the slightest idea of begging have been induced to adopt that course of life by coming in contact with confirmed vagrants, and hearing from them glowing accounts of the sums often made.

The most profitable qualification for a beggar is a faculty of lying, for it enables him to obtain donations with ease from persons of opposite characters. By day he can read the Scriptures, in the streets, and profess himself a thoroughly converted man, while at night he may play the violin, and sing immoral songs to extract pence and drink from company of the most abandoned kind; in short, it would seem that without falsehood and artifice begging could not be profitably carried on, for it is notorious that the most deserving persons always prove the least successful mendicants, and investigation shows that success in this walk of life generally smiles on the most abandoned and unscrupulous.

The history of the latter years of the lives of professional vagrants is a deeply painful study; the most deserving among them contract illness from want and exposure, soon enter a workhouse, and sink into a premature grave. The more hardened, after travelling through every part of the country, generally settle at length in a large town, open lodging-houses for

tramps, play, sing, and read the Bible from one public-house to another, and not a few become keepers of houses for abandoned women; and, alas! that it should be our duty to record that the blind villain often succeeds in doing that which could not be accomplished by his sighted companions, and this even to the extent of going to foreign lands for the purpose of enticing young girls from their homes and country, who would never have believed in them if blindness had not imposed on the poor victims, so as to induce them to credit fallacious promises; but who is to blame for the mass of evil here disclosed, the Blind or society generally? Doubtless both, but we think the blame chiefly rests on society. A man, say thirty years old, is enjoying a respectable position as a mechanic or policeman, suddenly, from a cause for which he is in no way to blame, he is smitten with blindness, his weekly earnings altogether cease, the landlord clamours for rent, the last article has been pledged, and his wife and children are starving around him, what can he do?—go to the workhouse to be separated for ever from his wife and children, with the torture of knowing that they are under the same roof as himself, and yet he cannot even speak to them, or hear their kind voices to cheer him in his poverty and darkness? No! To this he will never consent; and his only alternative is the streets, and into the streets he goes, honest and well-intentioned, but he soon finds that timidity and truthfulness do not pay,—temptation is too strong for him, the first step is taken, and the progress in degradation is rapid. Say, reader, is there much blame to be attached to this poor creature? Should not a Christian community have reached out its hand at the moment when sight departed and said, "You cannot earn wages as formerly for the maintenance of yourself and family, we will, therefore, see that you are provided with proper support while you are receiving the necessary instruction to enable you to work

without sight, and we will undertake, as long as you conduct yourself well, that you are provided with remunerative employment?" But it may be said, this is being done by many institutions; we, however, reply that very little is being accomplished in comparison with what is required, and much of that little is not administered so as to meet the true wants of the blind. The horror with which those deprived of sight as a class reflect on the probability of their being forced to beg for a subsistence is well shown in the following lines by Dr. Blacklock, the blind poet:—

"Dejecting prospect! soon the hapless hour
May come—perhaps this moment it impends:
Which drives me forth to penury and cold,
Naked, and beat by all the storms of heav'n,
Friendless, and guideless, to explore my way;
Till on cold earth the poor unsheltered head
Reclining, vainly from the ruthless blast
Respite I beg; and in the shock, expire."

How far the amelioration of the condition of the Blind might be carried may be seen by the following account of the operations of the Association for Promoting the General Welfare of the Blind:—

"In 1853 there were about 30,000 blind persons in the kingdom, 3000 being under and 27,000 above the age of twenty-one. For the amelioration of the condition of the former class there existed institutions or schools, containing about 1200 inmates. These pupils, after being boarded, lodged, and instructed for several years, were returned to their homes. The principle on which all institutions for the blind had been established contained two fallacies, viz. it was assumed that the majority of the blind lost their sight in infancy; and it was also taken for granted that if they were instructed in youth, they would be enabled to provide for their own maintenance without further assistance. Both these assumptions were erroneous, statistics having proved that the blind generally lost their

sight as adults and not as children; and an examination into the history of those of the blind who had been at institutions having shown that after leaving such establishments, they were obliged to obtain their daily bread by begging in the streets, or were compelled to enter a workhouse. Of the 27,000 adult blind, about 1000 received pensions, averaging ten pounds per annum, from various London City companies and other charities; and when every allowance is made for the number maintained by their relatives, who are themselves generally very poor, it is evident that from 10,000 to 15,000 blind persons were in the year above named living by daily mendicity and parochial aid. But God was watching over the blind, and had his own way for the amelioration of their condition."

In the autumn of 1853 the writer received a letter from Miss Gilbert, daughter of the late Ashurst Turner Gilbert, Lord Bishop of Chichester, requesting him to call on her, as she had been told that he could give information respecting the condition and wants of the blind. With great joy he repaired to that lady, who determined to commence herself to give work to the blind at their own homes, at the same time requesting him to undertake the management of the scheme. This offer he thankfully accepted, and in May, 1854, work was given to the blind at their own homes, for the purposes of which undertaking a cellar, at 1*s.* 6*d.* per week, was taken in New Turnstile, Holborn. At first six men were employed, but the number was soon increased to ten, and in December, 1856, a society was formed, entitled "The Association for Promoting the General Welfare of the Blind," the more immediate objects of which, according to its second rule are, "to afford employment to those blind persons who, for want of work, have been compelled to solicit alms, or who may be likely to be tempted to do so; to cause those unacquainted with a trade to be instructed in some industrial art; and to introduce trades hitherto unpractised by the

blind; also to support a circulating library, consisting of books in various systems of relief print, to the advantages of which the indigent blind shall be admitted free of charge, and others upon payment of the subscription required by the committee; to enable blind musicians to show that loss of sight does not prevent their being efficient organists and scientific musicians; to collect and disseminate information relative to the physical, mental, moral, and religious condition of the blind; and to promote, among individuals and institutions seeking to ameliorate the condition of the blind, a friendly interchange of information calculated to advance the common cause."

How far the Association has succeeded up to the present time in carrying out this programme is shown to some extent by the following extracts from its reports.

The Committee, addressing the subscribers, state that—

"The total number of blind men and women now receiving benefits, in various ways, from the Society amounts to 172, of whom 61 are supplied with regular work at their own homes, 28 are instructed and employed at the workshops of the Association, and 25 are engaged in selling goods for the Society.

"Pensions, varying from £5 to £15. 12*s*. per annum, are granted to 16 blind persons who are unable to earn their own living; and 42 men and women, in addition to obtaining occasional employment and pecuniary aid, participate in the educational and religious advantages conferred by the Association on all persons connected with it.

"Of the total number of men and women employed at their own homes and at the workshops, 4 earn from £1. 1*s*. to £1. 5*s*. per week, 16 from 16*s*. to £1 per week, 16 from 12*s*. to 15*s*. per week, 17 from 6*s*. to 11*s*. per week, and 36 from 3*s*. to 5*s*. per week.

"Of the total number of persons assisted, about 60

are married, and have more than 80 children dependent on them for support. Of those employed at their own homes and at the Society's workshops, 31 are women, who earn respectively from 4*s.* to 10*s.* per week.

"The various articles made by the blind are quite equal in quality to those produced by the sighted, but the blind cannot work as quickly as other mechanics; and to compensate for their want of speed, the Association pays them double the wages usually given by manufacturers to ordinary workpeople. In addition to this high rate of wages, the Society continues to supply the blind with work, whether the articles sell or not, which is contrary to the general practice in the labour market, and makes great demands on the funds of the institution; but the object of affording remunerative employment to the blind, without excessive labour, is productive of so much good to those deprived of sight and to the community at large, that your committee feel the expenditure is well bestowed.

"Some idea of the amount of good thus accomplished may be gathered from the following examples:—

"'A.' became blind when a child; he was educated in two blind schools, but for want of work was obliged to beg through the country with his wife, who was also blind, and three young children. He is now supplied with constant work by the Association, and the whole family is thus rescued from vice. 'B.' lost his sight in infancy, and was an inmate of a workhouse for several years, where he had the character of being generally insubordinate. Proper instruction and employment, however, have not only made him docile, but have also transformed him into a really useful member of society. 'C.' lost his sight at the age of 17, and in the following year became totally deaf; in this forlorn condition he was entirely dependent for the necessaries of life on two sisters, who had no other

resource but needlework. His feelings, under these trying circumstances, are best given in his own words: 'I am very wretched, very wretched.' This poor blind and deaf man has been taught to read and write, and to work at brushmaking, by which he now earns 18*s*. per week. His sisters are both well married, and he himself rejoices in being able to maintain a wife and child. 'D.' was a foreign sailor, who lost his sight in the English service. He became entirely dependent on charity, and must have sunk lower and lower had he not been rescued by this Association, which now supplies him with work to the extent of 16*s*. per week. 'E.' became totally blind while a servant; her dependent position exposed her to great temptation. She was, happily, rescued by this Society, and now supports herself by the labour of her hands.

"These are but a few cases, but they are fair samples of the rest; and it is much to be regretted that there are at present no fewer than 288 blind persons applying to the Association for help, to whom no assistance can be rendered for want of funds. These 288 men and women are sunk in the same wretched condition as that indicated by the examples above given; and the committee earnestly appeal to those who can sympathize with blindness and poverty to furnish them with the means of at once admitting some of these poor sightless ones to the blessings of honest industry and Christian instruction.

"The industrial arts carried on are the following, viz. worked at by men,—the manufactures of brushes, brooms, baskets, carpentry, mats, rugs, chair cane and rush-work, nets, bead-work, hassocks, and firewood; made by women,—brushes, baskets, firewood, chair cane and rush-work, nets, knitting, ornamental leather-work, bead-work, and needle-work.

"The blind officials connected with the Society are the director, teachers of brush-making, carpentry, and bead-work; also a town traveller and a housemaid.

"One of the principal objects aimed at, from the commencement of the Association, has been to introduce trades hitherto unpractised by the blind; and, in pursuance of this design, several new industrial arts have been added to those usually carried on by persons without sight. It has, however, been considered of the highest importance that the blind should depend as much as possible on their own powers, and therefore only such trades have been permanently adopted as can be carried on without sighted superintendence. This course, in addition to developing the faculties of the blind to the largest extent, has produced a saving in the financial expenditure of no small importance, especially as the sums that would have been paid under other circumstances for sighted supervision are by this means spent directly upon the blind.

"About ten years ago the use of the sewing-machine was introduced by this Association, but, owing to the necessity that existed for the constant presence of a sighted attendant, it was felt desirable to devote the efforts of the Society to the development of such branches of industry as could be carried on by the blind without extraneous aid. The sewing-machine has, however, been subsequently adopted by some other institutions, and, by the aid of sighted supervision, has been productive of some good; should the time arrive that all the employments shall have been introduced that can be carried on by the blind without supervision, it may then be deemed the duty of the Association to adopt trades for which the direction of seeing persons is indispensable.

"The importance of giving work to the blind at their own homes is constantly being more forcibly illustrated; by this plan the blind are enabled to reside with their friends in whatever part of the country they may be located, and thus family ties are strengthened instead of being rudely snapped, as is too often the case where persons deprived of sight have to leave

all that is dear to them in this world, to obtain daily bread in some far-distant town. The cementing of social bonds is highly necessary for every class of the community; but in the case of those persons who labour under the heavy affliction of blindness, its importance can scarcely be exaggerated. As fully half the blind live in rural districts, the establishment of workshops in large towns is obviously insufficient to meet the circumstances of the case. Illustrations of how ardently some of the blind are attached to their relatives are constantly occurring. Several cases are known in which persons have willingly accepted smaller wages, in order that they might be enabled to live with their friends, instead of being separated from them by continuing to work in London.

"Your Committee have developed the department for giving work to the blind at their own homes as far as the means at their disposal would permit; but in peculiar instances they have been obliged to employ the blind in workshops, as some branches of industry require space to be successfully carried on; it is also usually indispensable that pupils should be instructed at the institution, but whenever work can be given to the blind at their own homes, that course is preferred.

"Your Committee, wishing to give to the Association the fullest development, in order that its benefits might be extended to the masses of the blind throughout the kingdom, recommended to the members of the Society that certain privileges should be given to those who support the Association, either by charitable contributions or by purchasing certain quantities of goods made by the blind. This recommendation has been adopted by the members of the Society, and the necessary steps have been taken to enable the supporters of the Association to elect a proportion of the recipients of the charity, while at the same time the Committee have the power to afford aid to the extent of their means to the most necessitous of the blind applicants.

"An election of recipients of the charity was held on December 7, 1869, when four persons were admitted to the benefits of the Association.

"Some idea of the extent of the operations of the Society may be gathered from the following list of counties in which the blind persons now reside who are supplied by the Association with work at their own homes and pensions :—

Berkshire.	Hertfordshire.	Suffolk.
Cumberland.	Middlesex.	Surrey.
Dorsetshire.	Northamptonshire.	Sussex.
Essex.	Oxfordshire.	Wiltshire.
Gloucestershire.	Shropshire.	Worcestershire.
Hampshire.	Somersetshire.	Yorkshire.
Herefordshire.		

"It cannot fail to be gratifying to the supporters of the Association to know that since the existence of this institution several societies have been formed on its model, some of which have been established for several years. The older associations are situated at Liverpool, Bradford, Sheffield, Peckham, Leicester, and Devonport; and they now collectively afford aid to about 300 of the blind.

"There are strong reasons for believing that similar Associations will soon be formed in other countries, and especially in the United States of America.

"The educational parochial classes continue their useful work, with an average attendance of 114 pupils per week. These classes are held at Westminster, Marylebone, and St. Luke's, Old Street; in them instruction is given in reading, writing, and arithmetic; and the thanks of the Association are due to the clergymen who lend their schoolrooms, as well as to the ladies who read to the blind at the classes and at the Society's institutions.

"The Sick Club, supported entirely by the workpeople, continues its beneficial operations, and during

the year many cases of illness have been relieved by its means.

"Some idea of the financial operations of the Society may be gathered from the following statement of its receipts and expenditure:—

"RECEIVED IN THE YEAR 1870.

On account of Donations, Annual Subscriptions, Legacies, Dividends, etc. .	£2948	11	11
On account of Sales of Goods made by the Blind, and of other articles . .	4032	13	11
On account of Pupils' Board and Lodging	20	5	6
Total Receipts during the Year .	£7001	11	4

"PAID IN THE YEAR 1870.

To Blind Workmen employed at their own homes	734	6	8
To Blind Workmen employed at the Institution and in out-door official capacities, etc.	1280	13	8
Pensions and Gifts to the Blind, and Expenses of the Educational Department, etc.	580	17	4
On account of Materials and Goods bought for Sale	2531	16	7
On account of Salaries of Officials, Rent, and Incidental Expenses	1800	15	6
Total Expenditure during the Year .	£6928	9	9

"Your Committee, while desiring to record their thankfulness to the Omniscient Giver of all good for the amount of success with which their labours have been blessed, are nevertheless sensible of the heavy loss the Association has sustained by the death of the Right Rev. A. T. Gilbert, the Lord Bishop of Chi-

chester, of whose large-hearted benevolence the Society has had many proofs.

"The Blind have never had a better friend than the good Bishop; and the subjoined Form of Prayer, written by his Lordship for the use of the Association, is so appropriate to the present wants and condition of the Blind, that the friends of the Society are earnestly invited to use this prayer in imploring God's blessing on the Association, that it may be enabled still further to promote the general welfare of the Blind."

FORM OF PRAYER.

Offered up at all Meetings of the Committees and Members of the Association.

O Lord Jesus Christ, who, in Thy ministry upon earth, didst make the Blind to see, the Lame to walk, the Deaf to hear, Lepers to be cleansed, the Dead to be raised up (Matt. xi. 5; Luke vii. 22); and, by Thy holy Apostle, hast commanded Thy followers, that we should bear one another's burdens (Gal. vi. 2): regard with Thy favour, we beseech Thee, and aid with Thy blessing, our humble endeavour to remove stumbling-blocks from before the feet of the Blind, to smooth their difficulties, and to strengthen their steps. Prosper our efforts, we humbly beseech Thee, O Father, to their worldly relief, and sanctify them, by Thy Spirit, to the increase in us of humility, faith, thankfulness, and charity, and to the growth in our afflicted Brethren and Sisters, of patience and resignation, of good-will to those around them, and of love to all, with all other graces that adorn the Christian life. Of Thy mercy, O Father, Son, and Holy Ghost, one ever-blessed Trinity in Unity, hear our prayer, and accept and bless the work of our hands. O prosper Thou our handiwork. Amen.

Lord, have mercy upon us.
Christ, have mercy upon us.
Lord, have mercy upon us.
Our Father, which art in heaven, etc.
The grace of our Lord, etc.

Scotland.

According to the census of 1861, the total number of the blind in Scotland was 2820, being a ratio of 1 in every 1086 of the population.

As compared with the previous census, the proportion of persons without sight had somewhat decreased, for in 1851 it was 1 in every 960.

Ages of Males and Females returned as Blind in Scotland in 1861.

Age.	Males.	Females.
Under 5	32	38
Between 5 and 10	66	28
„ 10 „ 15	66	62
„ 15 „ 20	68	48
„ 20 „ 25	78	47
„ 25 „ 30	63	44
„ 30 „ 35	68	52
„ 35 „ 40	75	51
„ 40 „ 45	75	59
„ 45 „ 50	83	57
„ 50 „ 55	98	82
„ 55 „ 60	93	83
„ 60 „ 65	122	132
„ 65 „ 70	104	111
„ 70 „ 75	109	147
„ 75 „ 80	75	145
„ 80 „ 85	67	134
„ 85 „ 90	34	62
„ 90 „ 95	14	27
„ 95 „ 100	8	7
100 and upwards	1	5
	1399	1421

The following Table will give some idea of the inequalities that exist between the ages of persons afflicted with blindness and the general population of Scotland; and will also show how powerfully the increase of years tends to produce loss of sight.

Blind. Blind in Scotland, 2820.		*General Population.* Total population of Scotland, 3,062,294.
Under 20 years of age .	408, or about 14½ p. c.	1,410,590, or about 46 per cent.
Between 20 and 40 years of age	478, or about 17 p. c.	889,345, or about 29 per cent.
Between 40 and 60 years of age	630, or about 22 p. c.	516,396, or about 17 per cent.
Between 60 and 80 years of age	945, or about 33½ p. c.	220,992, or about 7 per cent.
80 years of age and upwards	359, or about 13 p. c.	22,276, or about ¾ per cent.

Note.—In the total population there were 2695 cases in which no ages were returned.

The following Table will show the relative numbers of the blind in the various counties of Scotland, the institutions that exist for the education and employment of the sightless, and the number of persons assisted by such establishments.

Counties.	Number of the Blind.	Number of Institutions.	Number of Persons Assisted.
Shetland	64		
Orkney	46		
Caithness	60		
Sutherland	51		
Ross and Cromarty	119		
Inverness	104		
Nairn	12		
Elgin (or Moray)	47		
Banff	44		
Aberdeen	231	1	60
Kincardine	23		
Forfar	151	1	25
Perth	94		
Fife	110		
Kinross	9		
Clackmannan	18		
Stirling	89		
Dumbarton	27		
Argyll	118		
Bute	9		
Renfrew	132		
Ayr	136		
Lanark	484	1	114
Linlithgow	24		
Edinburgh	357	2	163
Haddington	32		

Counties.	Number of the Blind.	Number of Institutions.	Number of Persons Assisted.
Berwick	25		
Peebles	8		
Selkirk	3		
Roxburgh	35		
Dumfries	82		
Kirkcudbright . . .	33		
Wigtown	43		
Total . . . 33	2820	5	362

The first institution for the blind in Scotland was commenced in Edinburgh about the year 1793 by Mr. David Miller, himself blind, and by Dr. David Johnston, of Leith; since which time four other institutions have been established, some particulars concerning which will be found in the following Table :—

Date of Foundation.	Name and Location of Institution.	Number of Inmates.
1793	Asylum for Relief of the Indigent and Industrious Blind, Edinburgh	132
1828	Asylum for the Blind, Glasgow	114
	School for Blind Children, Edinburgh	31
1843	Asylum for the Blind, Aberdeen	60
1869	Institution for the Blind, Dundee	25
	Total number of Institutions, 5.	
	Total . . .	362

Moon's system of reading is used in the five Scotch institutions, but Alston's is specially supported at Glasgow, and is also employed at both the Edinburgh institutions.

The pentagonal arithmetic board, pricked writing, and maps of wood, needlework, and paper are in general use, and there is an excellent globe at the Edinburgh Asylum.

The training of the young does not receive as much attention at institutions for the blind of Scotland as in England, but this is more than counterbalanced by the excellent parental training received by the children at their homes.

Music is not cultivated at any of the institutions as a future means of livelihood, but the increasing use of organs in Presbyterian churches may probably soon open a field for the blind in this direction, which will doubtless be turned to good account.

And it is to be hoped that pianoforte tuning and teaching may also receive the attention they merit. The industrial arts carried on by the blind of North Britain are mattress and bed-making, and the manufacture of baskets, mats, matting, sacking, sacks and hair cloth, and brushes; also knitting and needlework, and twine spinning is in use at Glasgow to a small extent.

Mattress and bed-making are chiefly successful at the Edinburgh Asylum, but at Glasgow they are found of little use.

At Edinburgh, Glasgow, and it is believed at the other institutions, sighted persons are employed in making many of the articles manufactured.

A very large proportion of the amount annually received on account of sales by the Edinburgh Asylum is derived from goods made by the sighted, and bought by the institution for resale; and this practice while it produces considerable profit, at the same time gives increased facilities for the disposal of

articles made by the blind. The plan, however, has one great drawback, viz. it causes the superficial observer to believe that the amount of work done by the blind is much greater than it really is, but this error might easily be prevented, by the prominent insertion in all reports, etc. of a short paragraph clearly explaining the subject.

The managers of the Scotch institutions, unlike those of England, founded before 1854, early perceived the necessity of supplementing the education of the blind, by a system of regular employment. The committee of the Edinburgh Asylum, soon after the establishment of that charity, adopted the plan of giving work at the institution to those men who had learnt a trade. At first the wages paid were such as were usual with sighted workpeople employed by the piece, but subsequently extra money was allowed, it being found that without such aid, the blind as a rule could not live by their labour. The Edinburgh and Glasgow committees have of late made praiseworthy efforts in this direction, but it is much to be wished that the benevolent inhabitants of Scotland would strengthen the hands of the managers of these institutions, by affording them the means of making such payments to their workpeople as might enable them to obtain the means of subsistence without excessive toil. The persons employed at the Scotch institutions usually live in the towns in which the establishments are located, but it is greatly to be desired that the system should be extended to the blind living in the country, by giving them work at their own homes; so that the blessings of profitable employment might be extended to the sightless throughout the whole of Scotland, instead of being confined to three or four cities.

The women connected with Scotch institutions generally live on the premises, but at Edinburgh they have recently been, or are about to be, employed as day workers like the men.

It is much to be regretted that no pensions have been founded for the blind of North Britain, as there are very many persons whose age and infirmities prevent their being assisted in any other way.

IRELAND.

According to the census of 1861, the total number of the blind in Ireland was 6879, being a ratio of 1 in 843 of the population. As compared with the previous census, the proportion of persons without sight had somewhat increased, for in 1851 it was 1 in every 864. Some idea of the ages of the blind in Ireland may be gathered from the following statement, made by the census commissioners for that country in 1861, in their report and tables relating to the status of disease, p. 45, viz.:—

"Of the entire number whose ages were specified, there were only 340 under 15 years of age; from 15 to 30, there were 1116; from 30 to 50, as many as 1579; from 50 to 70, there were 2310; from 70 to 80 years of age, 868; and from 80 to 90 and upwards, so many as 654.

"Dividing the age period in this Table into two sections, there will be found 2656 persons, or 386 per 1000, under 45 years of age, and 4211 over that age, or as many as 614 per 1000; the sexes in the former being 100 males to 108·31 females, and in the latter, 100 males to 125·31 females. Now, in the population of the healthy agricultural county of Carlow, the proportion of persons under 45, is 765 per 1000, and over 45, but 235. And in the town of Drogheda, a similar calculation shows 783 per 1000 under 45 years of age, and 217 over that period, so that so far as the Irish returns elucidate this subject, they tend to prove the longevity of the blind. At the same time it must be borne in mind, in considering the value of these

calculations, that the amount of blindness, whether caused by accident or disease, increases with age."

The following Table will show the relative numbers of the blind in the provinces of Ireland, the institutions existing for the education and employment of the sightless, and the number of persons assisted by such establishments.

Provinces.	Number of the Blind.	Number of Institutions.	No. of Persons assisted.
Leinster	1671	5	235
Munster	2541	2	98
Ulster	1820	2	48
Connaught	847		
Total 4 provinces .	6879	9	381

Of the total number of the blind in Ireland, 1962 lost their sight from ophthalmia, 725 from smallpox, 554 from accidents, 416 from cataract, 203 from inflammation, 178 from old age, 121 from fever, 110 from amaurosis, 47 from the consequences of child-birth, 28 from measles, 25 from scarlatina, while no fewer than 383 are returned as having become blind from diseases of the brain and injuries to the head and nervous system, and in 1589 cases the cause of the affliction was unstated.

The first society for the instruction of the blind in Ireland was commenced in 1810, under the name of the Richmond National Institution for the Instruction of the Industrious Blind; and there have since been established eight other charities, of which the following Table will furnish some particulars.

Date of Foundation.	Name and Location of Institution.	Number of Inmates.
1810	Richmond National Institution for the Instruction of the Industrious Blind	20
1815	The National Institution and Molyneux Asylum for the Blind of Ireland	71
1831	Ulster Society for Promoting the Education of the Deaf and Dumb and the Blind, Belfast .	33
1840	County and City of Cork Asylum for the Industrious Blind, Cork	98
1857	Day-school and Lending Library for the Blind, Dublin	
1860	St. Mary's Catholic Asylum for Industrious Female Blind, Dublin	100
	Male Catholic Blind Asylum, Dublin	44
	The Macan Asylum for the Blind, Armagh	15
	Institution for the Blind, Limerick	
	Total number of institutions 9	—
	Total number of inmates . . .	381

Of the foregoing institutions, five are under the management of Protestants, three of Roman Catholics, and one, viz. that of Cork, is of a composite character. Moon's system is generally read, but the Roman character is also encouraged. Appliances for writing and arithmetic and tangible maps are very little known, but good oral instruction is given to the pupils. Music is, to a small extent, cultivated as a future means of

subsistence, but little or no attention is given to the higher branches of education. Basket-making is carried on in all the establishments, both for males and for females. At Belfast the boys make door-mats, and at the Female Catholic Asylum, Dublin, girls are engaged at the same occupation.* There are no societies in Ireland for giving work to the blind at their own homes, for employing them in workshops, or for granting pensions; and until these important departments are developed, very little good can be expected from the operations now being carried on.

It is matter of regret that while so large a proportion of the soil of Ireland remains unproductive, no attempt should have been made to employ the blind in the cultivation of osiers for basket-work, and especially so, as, while the land is well suited for the purpose, the Irish osier dealers are largely supplied from Germany. In general, the inmates of the blind institutions are connected with the various Poor Law Unions throughout the country, about 19 pounds per annum being paid for the board of each pupil. In addition to the establishments already named, there is in Dublin a charity known as Simpson's Hospital, which was founded and endowed in 1779 by a merchant of Dublin, whose name it bears, who suffered from gout and defective sight, for the reception and maintenance of a certain number of men suffering from gout or blindness. At present out of 77 inmates there are 49 totally or partially blind.

Near this institution there is a bridge over the river Liffey, concerning which it has frequently been reported in England that all blind persons were allowed to pass over without paying the customary toll; when, however, we visited Dublin a few years ago, we found that the bridge was only free to those who wore the uniform of Simpson's Hospital. There is a curious

* Brush-making is carried on at the Male Catholic Asylum, Dublin, and knitting is in use at all schools for females, whether blind or not.

circumstance connected with this subject, for while in London, many were praising the liberality which allowed the blind to pass over a bridge in Dublin without payment, which fact was erroneous, although it had often appeared in print, such persons were unaware that a reality of a similar nature existed in their very midst, for the proprietors of Putney and Fulham Bridge have for many years allowed all blind persons to pass through their toll-gate without payment. And this is only one of many cases, in which the writer has found things to exist in England that were supposed to be wanting, and for which other places were praised that did not possess them.

A FEW REMARKS ON THE REQUIREMENTS OF THE BLIND OF THE UNITED KINGDOM, AND HOW FAR SUCH REQUIREMENTS HAVE BEEN MET BY EXISTING INSTITUTIONS.

To ameliorate as far as possible the condition of the 29,051 persons who are without sight in Great Britain and Ireland, it is desirable that the following objects should be fully and efficiently carried out, viz.,

1. Religious, intellectual, industrial, and professional instruction should be afforded to all who need it.

2. Regular employment with extra wages to compensate for the want of speed, which is an inevitable condition of blindness, should be given to all who are not disqualified for daily labour by age or infirmity.

3. A Normal School or Institution, for the training of instructors of the blind, should be established, where both blind and sighted aspirants might be prepared for their work.

4. Pensions should be accorded to those of the blind who are aged or incapable.

5. And homes should be established where the friendless should be received without payment.

Before considering how far these objects have been carried out by existing institutions, it may be desirable to ascertain, as far as possible, what is the present condition and requirements of the mass of those who labour under such a heavy privation as that of loss of sight. It has been proved by experience that the blind, generally, are capable of receiving such religious and secular instruction as may place them on a level, both morally and intellectually, with their sighted brethren. With respect to religious instruction, we think it may be considered that with regard to the blind, this is amply provided for in this country by the institutions, a list of which has already been given, and by numerous smaller societies which exist in almost every town of importance, by whose instrumentality persons are sent to the blind at their homes to teach them to read, and to lend them embossed portions of the Bible, which are exchanged as often as may be required. There are also, in connection with the Association for Promoting the General Welfare of the Blind and the Indigent Blind Visiting Society (in London), classes held in various places, in which the blind of the respective neighbourhoods are taught to read, and are also supplied with religious and secular knowledge. The persons who attend these classes, each receive 3*d*. at every meeting for the payment of a guide, but when they walk without assistance the payments are not withheld.

The Indigent Blind Visiting Society also sends persons to visit the sightless at their homes, who read to them, and furnish them with certain quantities of bread and coals, and with pecuniary assistance. Although, however, the special religious requirements of the blind may be considered as being fully met; with their intellectual wants it is far otherwise. To be kept acquainted with current events, to feel themselves on an equality with their neighbours in general information, and to have an opportunity of satisfying the cravings of their minds, for the acquisition of knowledge, are what the blind

need to a far greater extent than other persons. The resident inmates of institutions are pretty well supplied in this respect, but the mass of those without sight have to depend on the kind offices of poor friends and neighbours, which are very inefficient for meeting the wants of the case. If existing societies for imparting to the blind religious instruction were to extend their plan, so as to include secular information, much good might be done, but it must be borne in mind that men and women without sight require to be made acquainted with general literature, and with the contents of newspapers, as much as their more fortunate brethren. Something in this direction has been done, but it is so small that the effects are almost inappreciable. A class in connection with the Scotch church, Regent's Square, is held at Middlesex Street, Somers Town, and it is much to the credit of its promoters that secular reading forms no small part of its operations. A few similar efforts have also been made in other parts of London and elsewhere, and it is greatly to be wished that the system could be more widely diffused.

Of the educational wants of the blind of the upper classes, and of other matters connected with this branch of our subject, we have so fully treated elsewhere, that any further notice of them is unnecessary. For the successful prosecution of the study of music or other profession as a future means of subsistence, youth is indispensable; but it has been shown beyond doubt that a blind person of average ability and health is capable, up to the age of forty years, of acquiring such a knowledge of certain professions and industrial arts as may enable him, with proper encouragement, to provide to a great extent for the support of himself and family. We know that this has often been done by individuals above the age just named, but such instances must be considered more as exceptions, than as cases sufficiently strong for the establishment of a general rule. Taking, then, forty years as

the maximum, we find that the number of the blind in the United Kingdom under that age is 9304; and if we consider that those who have received, and who are receiving instruction, amount to 3189, and if we allow 10 per cent. for those of independent means, or who are disqualified by infirmity, we shall find that the number of persons now requiring instruction, to enable them to earn their own living, amounts to 5185.

Instruction, without subsequent employment, is almost useless; and it is therefore of the highest importance that those who have been properly taught should be supplied with regular work, and receive such pecuniary returns for their labour as may enable them to maintain themselves and families.

It is probable that at the present time the number of the blind in the United Kingdom willing to work, including those requiring preliminary instruction, exceeds 7000; and if we deduct from this number those employed by the various societies that afford work to the blind, we find that no fewer than 6300 men and women without sight are calling for employment.

The necessity that exists for the instructors of the blind receiving a suitable preparation for their work, has been so fully considered in another part of this volume, that we need only refer to it here to include the establishment of a normal school for the purpose, among the subjects earnestly demanding attention, and to point out that of all matters connected with the welfare of the sightless, this is the one most urgently demanding the support of the Legislature. The number of the blind in the United Kingdom who at present require or receive pensions is probably about 17,000; but it would not have been by any means as large if those who lost their sight before the age of forty years had obtained proper instruction and subsequent remunerative employment.

The number at present receiving pensions of various sums is about 2000, which leaves about 15,000 who need

but cannot obtain assistance of this kind. It must be, however, observed that the amount known to be annually distributed as pensions only gives an average of £9 per head, whereas a pension really to effect the object sought, namely, to keep the recipient from seeking alms, or entering a workhouse, should not be less than £26 a year. Although it is desirable to connect the blind with their families, and to do everything possible to strengthen social ties, yet there are many cases in which those suffering from loss of sight are so utterly helpless and without friends, that an asylum where they can be received and cared for for life, is the only thing that meets their condition. The number actually needing such help, and to whom any other means of assistance would be inappropriate, is not very large, but still sufficiently so to merit attention, and especially as the institutions where persons are received for life do not accommodate more than 300 inmates, which is not by any means equal to the requirements of the case.

APPENDIX.

The following account, taken from the 'Family Herald' of Nov. 19, 1864, strikingly shows how in Germany persons have been blinded for purposes of begging.

THE BLIND PRINCESS.

The blind young Princess of —— was lately presented to the Empress Eugénie at Schwalbach, and the utmost interest and sympathy were excited by her story. The lady is well known all over Germany, and her princely domain is visited every year by crowds of strangers.

The story of this young princess is perhaps the most touching romance of the nineteenth century. As a child she had been stolen from the gardens of the very château she now inhabits. A careless nurse, bent on her own enjoyment, had suffered her master's child to stray towards the river, and when, in answer to the frantic appeals and the search made in every direction, no signs of the infant's presence could be discovered, it was concluded she had fallen into the river and been drowned. The despair of the mother was beyond all description; but the idea of the child's death, accepted by all besides, was rejected entirely by her. When the death of the prince, her husband, had released her from the obligation to remain in the château, she set out upon a strange pilgrimage all over the Continent, fully convinced that she should find, one day or other, the object of her search. During the embassy of Prince Talleyrand she came to London, and was received by Queen Adelaide with the utmost kindness and sympathy. Soon afterwards she went to the south, still bent on finding her lost child.

One day, the carriage climbing slowly up one of the steep

hills in the neighbourhood of Lausanne, the bereaved mother was accosted by a beggar woman, holding by the hand a poor blind girl, for whom she was imploring alms. The girl looked gentle and sweet-tempered, resembling in no way the harsh vixen whom she called mother. The inmate of the carriage had fallen into a doze, and the woman bade the girl sing to arouse the lady. The song was a vulgar ditty belonging to the district, with no romance to ensure attention, yet it woke the lady, and she stopped the postilion while she questioned the girl as to her origin. The day and hour were come at last; every word uttered by the maiden confirmed the suspicion of identity. Memory was confused,—it had vanished with her sight; but by dint of threats and promises the woman was made to confess that she had purchased the girl when quite an infant from a beggar woman like herself, who owned to have deprived her of sight in order to excite compassion. The locality whence the child had been taken was proof sufficient of the truth.

The mother returned home with her poor blind child and devoted her whole life to the prospect of cure, as she had done before to that of discovery. But all attempts failed, and she then gave herself up entirely to the education of her helpless charge. In this she succeeded perfectly, and the princess is considered one of the most accomplished reciters of Uhland and Schiller in all Germany. Before dying, the fond mother reaped her reward in the marriage of her daughter with the young prince, her nephew, and this consolation is the greatest which could be felt by her friends. The young princess, on the visit to the Empress, recited, with the most exquisite clearness and pathos, two scenes from "Count Egmont" and "The Diver," while the imperial lady listened entranced, the large tears rolling down her cheeks as she gazed on the wreck which the wickedness and cupidity of man had made of one of the most beautiful works of God's creation.

Extracts from a poem by James Downing, who lost his sight from ophthalmia, while serving in Egypt, in 1801, as a private in the 20th Regiment of the Line, under Sir Ralph Abercrombie.

The following verses, although rude in composition, yet illustrate so well what must have been the feelings and position of many of those who lost their sight from Egyptian ophthalmia that it is thought desirable to insert them in this place.

The writer says:—

"Our able men were all employ'd,
Relieving every day,

The French from Alexandria,
That they might go to sea.

"The second day it was my lot,
Which burden was not hard,
To take the dinners to our men,
Who were that day on guard.

"'Tis true the sun shone very hot,
The sand reflected white;
But I had not a single thought
That I should lose my sight.

"As I drew near the city gates,
While viewing of the walls,
A blast of wind blew in my eyes,
Which seemed like burning coals.

"Immediately I felt a pain,
In one or both my eyes;
This very much discouraged me,
And filled me with surprise.

"That I should lose my eyesight now
Was much upon my mind,
As many of my countrymen
Had lately been struck blind.

"The water gushed from my eyes,
The inflammation strong,
The sun shone bright, so that I scarce
Could find my way along.

"When I arrived at the place,
The soldiers saw my state,
And wished that I might get relief
Before it was too late.

"But when I came again to camp,
My pain was very great,
One eye was swelled very much,
And in a constant heat.

"I waited on a surgeon then,
The nearest to that place,
But who, I since had cause to think,
Was ign'rant of my case.

"From him I could get no relief;
Thus in this wretched plight
I then returned to my tent,
And spent a mournful night.

"How glad was I when morning came,
As you might well suppose!
But by this time the other eye
Had taken the disease.

"The sergeant soon came by, and call'd
The blind from every tent,
Then we took hold each other's coats,
And to the doctor's went.

"The doctor having view'd my case,
Order'd me instantly
To go into the hospital,
With which I did comply.

"Five blisters I must have appli'd
About my head and eyes,
But what did more augment my pain,
The place so swarmed with flies.

"In order to afford relief
Experiments were tri'd,
Large poultices and likewise drops
Were frequently appli'd.

"But these prov'd ineffectual
My eyesight to restore,
And sometimes I had painful thoughts
That I should see no more.

"Thus sev'ral days and weeks I spent,
Rack'd with distressing pain,
And scarcely thought it possible
I should my sense retain.

"Oft have I wish'd that some one would,
With pistol, sword, or knife,
In order to relieve my pain,
Cut short my wretched life.

"But blessed be the God of Love,
Who did not at this time,

In answer to my rash request,
Cut me off in my prime.

* * * * *

"When we at Greenwich safe arriv'd,
We cast our anchors there,
Into the barges we were sent,
And forward we did steer.

"As night was coming on apace,
Each one bound up their eyes;
We sailed under London Bridge,
And Westminster likewise.

"Between the hours of twelve and one
We reach'd the destin'd shore,
When I with care was help'd thereon,
To cross the seas no more.

"Some men came down to our relief,—
I thought this look'd well,—
In order to conduct us safe
To Chelsea Hospital.

"The men conducted us with care,
And led us to the place;
The kindness I received there,
Time cannot well erase.

"Each being seated on a bed,
We thought that we were blest,
And when we had refresh'd ourselves,
We all retir'd to rest.

"Thus having gain'd refreshing sleep,
When call'd and bid to rise,
We scarcely knew where we were got,
Which filled us with surprise.

"O how desirable is rest,
Upon the sea or land!
Those who support a place like this
Our warmest thanks demand.

"Here I was us'd as well as man
Could ever wish to be,
Yea, all of us were treated with
Great hospitality.

"We asked when we should go home,
They answered very soon,
And told us we should pass the board
The seventh day of June.

"This was the Monday following,
When many of the blind
Were led from Chelsea to the place,
By men who acted kind.

"The people stood and pitied us,
As very well they might;
Yea, some of the nobility
Were moved at the sight.

"Their kindness to us they made known,
Our case they did lament,
When money, with some handkerchiefs,
They did to us present.

"Thus being treated with respect,
This did relief afford;
We thank'd them kindly for the same,
Then went and pass'd the board.

"A pension they allowed us,
Which satisfied us well;
Then we were all conducted back
Into the hospital.

"The Duke of York, whose kindness then
I always shall revere,
He acted like a soldier's friend,
And with a parent's care!

"All our accounts were settled up,
And every man was paid,
And the expense for riding home,
Our Government defraid.

"In the road waggon I was book'd,
And one pound six was paid,
In order that I might with care,
Be to my home convey'd.

"About the hour of twelve o'clock,
For Cornwall I set out,

With six blind passengers beside,
All taking the same rout.

"I was eight nights upon the road,
Which much fatigued me,
Before I reach'd the long sought place,
Of my nativity."

THE OPHTHALMOSCOPE AND REMARKABLE INSTANCES OF THE RECOVERY OF SIGHT.

In that tiny looking-glass, the ophthalmoscope, the medical profession possess a precious agent in the cure of diseases of the eye. Before this invention enabled the surgeon to see into the whole of the interior of the eye, and thus to become visually acquainted with every feature of the disease, the methods of treatment of the subtle and manifold forms of eye-diseases were necessarily most imperfect. We will give an instance of the great benefit which the ophthalmoscope is capable of conferring. An aged woman took her grandchild to the London Ophthalmic Hospital, to be treated for some affection of the eyes. The child was attended to, and the woman about to depart with it, when she said she supposed the gentleman could not do anything for her eyes. She said that when about two years of age a fork had been run into her left eye, that cataract had followed the injury, and she became blind in that eye. A country surgeon had operated on her for cataract, but the sight of the eye never returned. Mr. Wordsworth examined the eye by means of the ophthalmoscope, and discovered that a little membrane obscuring the retina had not been removed at the original operation, and that its presence had caused the blindness.

The old lady now submitted to have this obstruction removed, and she regained the precious sight of which she had been deprived for nearly seventy years. The restoration of vision was most opportune, for, with advancing years, a cataract was forming in the right eye, which would have totally deprived her of sight in a month or two.

In a letter to the 'Globe,' Dr. Kidd mentions the following instance of the restoration of sight in a young woman born blind. He says,—

"I saw individually, and observed with interest, the following case, a short time ago, at the Eye Institution, Moorfields,—a case that would be invaluable to Berkeley, as bearing on the

part played by the senses in intellect. An interesting-looking young woman, twenty-two years of age, born stone-blind—partly educated in the family of a clergyman, all this time by finger alphabets, as we see blind men tracing the letters in one or two places in town—blind for twenty-two years—was restored to perfect vision in four days by a surgical operation, and to partial vision in two minutes. This young woman, in an instant, having been twenty-two years, and from her birth stone-blind of congenital cataract, began to see, as these deaf mutes in Paris begin to hear for the first time. The effect in the young woman was most curious, and something of this kind. She saw everything, but there was no idea whatever of perspective. She put her hand to the window to try to catch the trees on the other side of the street, then in Moorfields, she tried to touch the ceiling of a high ward; she was utterly ignorant, also, of common things—what such things as a bunch of keys were, of a silver watch, or a common cup and saucer; but when she shut her eyes and was allowed to touch them (the educated sense) she told them at once! She could almost distinguish the greasy feel of a silver half-crown from the cold, dry, harsh feel of a copper penny. Her joy was excessive when shown some mignonette and sweet-pea that one of the surgeons had accidentally in his coat, for it seemed she knew all the plants in the clergyman's garden by the touch and smell! She looked at the bunch of keys, and with equal blankness at the flowers, then shut her eyes so as to recognize them; all this took up less than five minutes. But she failed to say, as well as I now remember the case, 'These are flowers.' But on my saying, when she opened her eyes again, 'Why these are flowers.' 'Oh! so they are,' she replied, shutting her eyes again quickly, and putting them to her nose. 'This is mignonette,'" etc.

THE HISTORY OF SPECTACLES.

That the ancients had no knowledge of glasses for assisting impaired sight, we may conclude from their universal silence on this matter; the only relief they had in such cases being certain collyria or eye-salves. We are also told that old men among the classical ancients read through a simple tube, which, by isolating objects, made vision more distinct. Ten centuries of obscurity intervene, until the Arabians begin to cultivate the learning of the Greeks, when several of their philosophers resumed the study of optics. The earliest of their works which has reached us is the celebrated treatise of Al Hassan, a distinguished mathematician, who died A.D. 1038. It was trans-

lated from the Arabic into Latin by Risneir, and was published under the title of "Opticæ Thesaurus." In it he notices the magnifying power of segments of spheres of glass, a hint from which it is supposed by many that the invention of spectacles originated.

In the writings of the renowned and learned friar, Roger Bacon, the following passage occurs:—"A plano-convex glass is useful to old men, as well as to those who have weak eyes; for they may see the smallest letter sufficiently magnified." That spectacles are alluded to there can be no doubt; but that the idea originated with him—as maintained by several—is by no means so clear. However, it is quite certain that they were known and used about the time of his death, which occurred in the year 1292.

Alexander D'Spina, a native of Pisa, who died in 1313, having seen a pair of spectacles made by a contemporary, a Florentine nobleman named Salvino Armati, who was unwilling to communicate the secret of their construction, had a pair made for himself, and found them so useful that he cheerfully made the invention public. Dominic Maria Manni, an Italian writer of eminence, also attributes to Armati the credit of being the originator. A person, rejoicing in the name of Spoon, fixes the date of the invention between the years 1280 and 1311. Signor Redi, from whom Spoon quotes the preceding fact, states that he possessed a manuscript, written in 1299, in which the author says, "I found myself so pressed by age that I can neither read nor write without these glasses they call spectacles, lately invented, to the great advantage of poor old men when their sight grows weak."

The learned Du Cange, who died in 1688, carries the invention further back, assuring us that there is a manuscript in the French King's Library, which shows that spectacles were used in Constantinople in the year 1150; nevertheless, it is stated in the Italian Dictionary — Della Crusca — that Friar Jordan Rivalta, of Pisa, told his hearers, in a sermon preached in 1305, that "it was not twenty years since the art of making spectacles was found out, and is, indeed, one of the best and most necessary inventions in the world." This would place the invention in 1285.

Bernard Gordon, a celebrated physician of Montpelier, in his "Lilium Medicinæ," published in 1305, recommends an eye-salve as "capable of making the patient read the smallest letters without spectacles;" and Muschenbroek informs us that it is inscribed on the tomb of Salvino Armati (to whom we have already referred), that he was "the inventor of spectacles." He died in 1317.

In legal parlance we have now "stated our case;" but the

evidence is so conflicting that we must repeat our inability to solve the question which forms the caption of this article. However, before we close, we would refer to the very general use of "glasses" within the last few years (particularly by young ladies), which has been a source of much ill-natured comment. We presume that it is the revival of an old but injurious custom that prevailed about the middle of the last century at Madrid, and especially at Venice—where spectacles were worn by persons who had no occasion whatever for their use. "All the people of fashion and quality," observes Vign. De Mary, "had them continually on their noses, a folly that had its source in the natural pride of those who value themselves on a profound wisdom, and affect to stare very near at everything, as if their eyes were weakened and worn out with excess of attention."—*From the 'New York Home Journal.'*

THE BLIND BOY AT PLAY.

"The blind boy's been at play, mother,
And merry games we had;
We led him on our way, mother,
And every step was glad.
But when we found a starry flower,
And praised its varied hue,
A tear came trembling down his cheek,
Just like a drop of dew.

"We took him to the mill, mother,
Where falling waters made
A rainbow o'er the rill, mother,
As golden sun-rays played;
But when we shouted at the scene,
And hailed the clear blue sky,
He stood quite still upon the bank,
And breathed a long, long sigh.

"We asked him why he wept, mother,
Whene'er we found the spots
Where periwinkle crept, mother,
O'er wild forget-me-nots:
'Ah me!' he said, while tears ran down
As fast as summer showers,
'It is because I cannot see
The sunshine and the flowers.'

"Oh, that poor sightless boy, mother,
Has taught me I am blest;
For I can look with joy, mother,
On all I love the best.
And when I see the dancing stream
And daisies red and white,
I'll kneel upon the meadow sod
And thank my God for sight."

A POEM BY KEATS.

"I cannot see what flowers are at my feet,
Nor what soft incense hangs upon the boughs;
But in embalmed darkness guess each sweet
Wherewith the seasonable month endows
The grass, the thicket, and the fruit-tree wild;
White hawthorn, and the pastoral eglantine;
Fast-fading violets covered up in leaves;
And mid-May's eldest child,
The evening musk-rose full of dewy wine,
The murmurous haunt of flies on summer eves."

THE BLIND BOY'S REFLECTIONS.

"Though darkness still attends me,
It aids internal sight;
And from such scenes defends me,
As blush to see the light.

"No villain's smile deceives me,
No gilded fop offends,
No weeping object grieves me,
Kind darkness me befriends.

"Henceforth no useless wailings,
I find no reason why;
Mankind, to their own failings,
Are all as blind as I.

"Who painted vice desires,
Is blind, whate'er he thinks;
Who virtue not admires,
Is either blind or winks."

EYES AND TEARS.

It is remarkable that the Creator has ordained that the organs which are instrumental in conveying to mankind the greatest number of pleasurable sensations, should also be employed to exhibit man's deepest grief; and in connection with this subject Andrew Marvel says, in a poem entitled 'Eyes and Tears,'—

"How wisely Nature did decree
With the same eyes to weep and see!
That having view'd the object vain,
They might be ready to complain.
And, since the self-deluding sight,
In a false angle takes each height,
These tears which better measure all
Like wat'ry lines and plummets fall.
Two tears, with sorrow long did weigh,
Within the scales of either eye,
And then paid out in equal poise,
Are the true price of all my joys.
What in the world most fair appears,
Yea, even laughter turns to tears:
And all the jewels which we prize,
Melt in these pendants of the eyes.
I have through every garden been,
Amongst the red, the white, the green;
And yet from all those flow'rs I saw,
No honey, but these tears could draw.
So the all-seeing sun each day
Distils the world with chemic ray;
But finds the essence only showers,
Which straight in pity back he pours.
Yet happy they whom grief doth bless,
That weep the more, and see the less;
And, to preserve their sight more true,
Bathe still their eyes in their own dew.
So Magdalen, in tears more wise,
Dissolv'd those captivating eyes,

Whose liquid chains could flowing meet,
To fetter her Redeemer's feet.
Not full sails hasting loaden home,
Nor the chaste lady's pregnant womb,
Nor Cynthia teeming shows so fair,
As two eyes, swol'n with weeping, are.
The sparkling glance that shoots desire,
Drench'd in these waves, does lose its fire.
Yea, oft the Thunderer pity takes,
And here the hissing lightning slakes.
The incense was to Heaven dear,
Not as a perfume, but a tear!
And stars show lovely in the night,
But as, they seem, the tears of light.
Ope, then, mine eyes, your double sluice,
And practise so your noblest use;
For others, too, can see, or sleep,
But only human eyes can weep;
Now, like two clouds dissolving, drop,
And at each tear in distance stop:
Now, like two fountains, trickle down:
Now, like two floods, o'er-run and drown:
Thus let your streams o'erflow your springs,
Till eyes and tears be the same things;
And each the other's difference bears;
Those weeping eyes, those seeing tears."

A description of various educational appliances referred to in this volume, and sold at the Depots of the Association for Promoting the General Welfare of the Blind, 210, Oxford Street, near Portman Square, W., and 125 and 127, Euston Road, N.W., London.

A Pen-Guide to enable the Blind to Write with Ink. *Price* 5*s*.

This appliance is designed to enable a blind person to affix his signature to documents; it also affords the means by which he may write letters and address envelopes in ink. With sufficient study this instrument is capable of being used by those blind from childhood, as well as by those who have lost their sight in mature life.

The contrivance consists of a small board, six inches long, four inches broad, and half an inch thick. Across the board is placed

a strip of wood, six inches long, half an inch broad, and about 3-16ths of an inch thick. The strip of wood is fastened to the board at one end, and it has a channel in its upper surface, which runs throughout the whole length. The paper must be placed between the board and the strip of wood, and be pressed upon the two pairs of pins which will be found near the top and the bottom of the board. Before, however, pressing the pins through the paper, care should be taken to see that the edge of the paper is close to the raised side of the board—both above and below the two pairs of pins.

The *pen* employed is one of the common kind, and to it is attached a small projecting piece of metal, which is called the *protector.*

The protector works upon the grooved strip of wood above described, and the point of the pen moves at the same time, and in like manner as the protector. In making *short* strokes the protector moves upwards and downwards in the groove, touching at each motion the top and bottom lines. When a *long* stroke is to be made, the protector is moved out of the groove on to the raised line on the top or the bottom, as the case may require; care being taken that the point of the pen be not removed from the paper while the protector is being raised from the groove to a raised line. The forefinger of the left hand follows the protector to measure the distance between words, and to keep the place when the pen is removed to obtain *ink*, etc.

To prevent the ink being exhausted before a fresh supply is obtained, the pen should be refilled after every eight letters. A shallow inkstand should be used, so that the pen may touch the bottom, and thereby indicate that a good supply of ink is secured. Before a fresh line is begun, the paper must be moved one degree upwards, which may be done by taking it off the two pairs of pins, and placing the hole that was made in the paper by the second pin upon the top pin, and the bottom hole upon the second pin from the bottom, at the same time pressing the paper upon the other two pins so as to make two fresh holes.

The smallness of the apparatus enables it to be carried in a coat pocket, and the protector will fit any pen.

As the point of the pen is not required to come in contact with a guide, a blot cannot easily occur.

In making the long strokes, the forefinger of the left hand keeps the protector from slipping off the raised line on to the paper, and thus prevents the letters from being made too long.

A Card to Enable the Blind to Write with a Pencil.

This appliance consists of a piece of cardboard of about eleven inches long, by nine broad. Across the card are placed a

number of strips of the same material. The strips are about a quarter of an inch broad, and are placed three-eighths of an inch apart.

In using this contrivance, place the card between the two halves of a sheet of paper, so that one half of the sheet is under the card, and the other half rests upon the raised strips or lines. Press the paper lightly with the hand, and see that the paper is kept straight by the top edge being against the bottom of one ot the lines. The pencil in forming the letters traverses *between* the raised lines, and when the end of a word is reached the fore-finger of the left hand is placed against the pencil. The pencil is then removed, and the space necessary to be left blank before the next word is commenced, is measured with the finger. Care must be taken to feel that the point of the pencil touches the raised line each time that it makes the bottom of a letter.

The tails below the line are made by taking the pencil up on to the raised line, and when the tail is made the pencil returns again to the indented space. The *tall* letters are made by taking the pencil on to the line above, and then returning it to the indented space as before.

Attached to the *writing card* is a kind of pocket to hold a small quantity of paper.

Embossed Writing Copies for the Blind. *Price* 6*d.*

These copies consist of the writing alphabet used by the sighted, and contain the *small letters*, the *capitals*, and the *figures;* they are designed to make those blind from infancy acquainted with the common mode of writing, and also to refresh the memory of those who lose their sight in mature life.

The letters are so formed that the most intricate of them may be made without the pen or pencil being once taken off the paper. Any person of average capacity may be enabled in a short time, by the aid of these copies, and of the two appliances before described, to sign his name to a document, and to write a letter either with pencil or with pen and ink.

An Apparatus to Enable those deprived of Sight to Write so that their Letters may be Read by the Blind and by the Sighted. *Prices* 12*s.*, 15*s.*, *and* £1. 1*s.*

This contrivance consists of a desk, fifteen inches long, twelve inches broad, and three inches deep, in which are contained stamps for embossing the common capital letters and the numerals. The desk also contains moveable lines used to secure

the paper and to guide the operator, and a moveable cushion. Arrangements are made to keep stationery and private papers, and the desk is secured by a lock and key. The desk should be placed in front of the operator, with the keyhole to the left-hand. On opening the desk, it will be found to consist mainly of two parts; that to the left having a velvet cushion, and that to the right being covered with wood. Beneath the velvet cushion is the receptacle for stationery and private papers. The right-hand compartment is divided into a number of cells, rather more than an inch square, each of which contains a letter of the alphabet. These letters are formed by sharp *brass pins* inserted into small oblong pieces of wood. The cells above named are divided into three rows; and the letters may easily be found by it being remembered that "A" begins and "I" ends the *first* row; "J" begins and "R" ends the *second* row; and "S" begins and the "&" ends the *third* row.

A sheet of paper being laid upon the cushion, care should be taken to see that the top and right-hand edges are placed evenly with the *wood-work;* the paper must then be secured by means of a thin bar of wood being placed across it. The *pegs* near the ends of the bar must be placed in the top holes at the sides of the cushion; and, the bar being pressed, the paper will be kept steady by two sharp pins, which will pass through it and enter the cushion.

In the higher-priced desks the lines are written along a brass ruler, which differs somewhat from that used for the same purpose in the cheaper desks. The brass ruler is placed across the paper, two pegs entering holes at the sides of the cushion. One side of the ruler will be found to be covered with notches throughout its whole length; this side should be placed towards the top of the paper. A metallic slide, having a projection, will also be found on the ruler. This projection, during the operation of writing, should be kept towards the top of the paper.

The writing is performed from *right* to *left;* the raised letters being read on the reverse side of the paper. Each of the small pieces of wood with the sharp brass pins has a notch in it, which serves to point out the *bottom* of the letter. This notch should be kept toward the ruler when the letter is being used.

A letter having been procured with the right hand is placed immediately to the left of the projection, and also close against the ruler; the letter must be pressed into the paper, and while it is being returned with the right hand to the cell it originally occupied, the left hand is engaged in moving the slide *two notches,* and thus preparing it to receive the next letter. After the letter "I" only one notch is taken, and at the end of a word the slide is moved *three* degrees. In moving the slide the thumb and

forefinger must be placed behind it, the former below, and the latter above the ruler, and the forefinger must press the part of the projection close to the ruler, and not that part that is furthest from it. After each movement, care must be taken to press the slide back against the last notch; for if this be not done the spaces between the letters will be irregular. When a line is finished the slide is turned, so that the projection is brought into a vertical position, and the slide may then be drawn from the left to the right side of the ruler; the ruler may then be removed to the holes immediately below it, and the writing may be proceeded with as before. If any difficulty be found in removing the slide after a line has been completed, the pegs of the ruler must be slightly raised in the holes, when the slide may be drawn back with ease. The number of holes on both sides should be counted if any doubt arise with regard to the ruler being straight.

At the extreme right of the desk will be found a compartment containing the ten numerals, and a place for envelopes, etc.

The cheaper desks have a *wooden* ruler, without a slide, and in this case the second letter is placed immediately to the left of the first, which is not removed until the second has been pressed. The words are divided by a *blank* piece of wood being put between them.

The small pocket apparatus has also a wooden ruler, and the cells containing the letters run from left to right, instead of from top to bottom.

In addressing an envelope the two thicknesses of paper must be stamped through from the back to the front, to do which more than ordinary pressure must be applied to the letters.

Arithmetical Apparatus. *Prices,* 6*s. and* 10*s.*

This appliance is intended to do for the Blind what the slate and pencil effect for the sighted; namely, to afford a ready and easy means of working sums, and of obliterating the figures when they are no longer required.

The instrument consists of a box fourteen inches long, eight inches wide, and about an inch and a half deep. The greater part of the box is covered by a metallic plate, and the remaining part with wood. The appliance is placed with one end towards the operator; that part of the box covered with wood being close to him.

On turning the button and opening the small lid on the right, a portion of the box will be exposed, in which may be found some pins without *points;* if there be not any pins in this aperture, some may be obtained by raising a few inches the end of the

box furthest from the operator, and shaking it slightly; this, by causing the pins to slide towards the opposite end, keeps the place supplied from which the pins are taken by the hand. The metallic plate is covered with a number of short parallel lines, which are raised about the eighth of an inch above the surface. Each line has two holes on either side, which are placed near its angles. The characters representing the ten numerals are formed by putting pins into these holes. The operation is as follows: by inserting a pin into the top hole on the left-hand side of a line the figure "1" is made; a pin at the *bottom* of the left-hand side represents the figure "2;" at the *right* top, the figure "3;" the right bottom the "0;" one pin at the top and another at the bottom on the left side is the figure "4;" one at the left and one at the right top, "5;" the left top and the right bottom, "6;" the left bottom and right top, "7;" the left and right bottom, "8;" the top and bottom right, "9."

It will be seen that no figure requires for its formation more than *one line*, and that not more than two pins are ever used to represent a single figure.

To find the holes easily the pin should be drawn lightly over the plate at the same time that it is pressed against the line in use; and it should be drawn up or down the line according to the figure that may be required to be made; in this way the hole sought may readily be discovered.

When it is wished to return the pins to the box, the metallic plate is raised from its flat position by taking hold of the piece of wood that projects into the place from which the pins are taken; the plate is turned quite over, so that the top is brought to where the bottom was, and the metallic side of the plate is downward towards the box. By this means the pins used in working the sum will fall out of the plate into the box, and thus the trouble is avoided fo replacing them one by one. In case some of the pins should not fall out, the plate should be shaken to produce the desired effect.

The signs for *Addition*, *Subtraction*, *Multiplication*, and *Division*, are made as follows:—

Addition.—Top and bottom left, and top right.

Subtraction.—Top and bottom left, and bottom right.

Multiplication.—Bottom left, and top and bottom right.

Division.—Top and bottom left, and top and bottom right.

It will be observed that none of these signs require more than one line for their formation.

A Tangible Measuring Tape. *Price* 3*s*.

The Yard Measure enables any one to measure by touch the circumference and the diameter of any object. It consists of a

piece of *tape*, on which the inches are marked in the common figures.

The exact boundary of the inches is shown by a thin line reaching across the tape, and the distance between the half inches by a line half across the tape.

When a measurement has been taken, the thumb of the right hand should be placed under the tape to support the figure it is wished to feel with the forefinger of the same hand.

The *Measure* is extremely light, so that it may be carried in the pocket.

A Chess and Draught Board. *Prices, large size*, 12*s.*; *with Draughts*, 15*s.* *For the pocket*, 9*s.*; *with Draughts*, 12*s.*

The larger Chess and Draught Board consists of a box about twelve inches square, by two deep. The cover of the box forms the board on which the playing is carried on, and the box itself is used to hold the pieces when out of use.

The difference in the colour of the squares on the board is made tangible by the black squares being raised above the white.

The Chessmen and the Draught pieces are alike furnished with pegs, which keep them steady when the pegs are placed in the holes on the board. In *Chess* the black pieces are generally distinguished from the white by each black piece having a dot on the top; but in the case of the black *Bishops* the distinction is made by the corners being allowed to project at the sides.

The colour of the draught pieces is perceived by the surface of the black being *rougher* than that of the white.

In playing at draughts, when a king is made, the peg of one piece is placed into the hole at the top of the other piece, which keeps the top piece firm; so that the two pieces are moved together without difficulty.

When a piece is taken, the board is drawn back, and the pieces dropped into the box.

The place for the white pieces is divided from that for the black by a partition running across the box.

The Chess and Draught Board for the pocket shuts up like a small box; and, unlike the larger board, the squares are not placed on the outside. The smaller board has a false back, which is removed before playing is commenced. The games of chess and draughts are played by a blind person in the same way as by his seeing antagonist; the only difference being that the one *looks* at the pieces, whilst the other *feels* his own and his adversary's positions.

AN INSTRUCTION BOOK FOR THE PIANOFORTE.—*According to Hamilton; embossed on the ordinary system of Musical Notation as used by the Sighted. Vol.* 1. 10*s.* 6*d.*

The objects of this work are to make the blind acquainted with musical notation as used by the sighted, to supply them with elementary musical knowledge, and to afford the means whereby blind teachers of the pianoforte may, when giving lessons, have under their fingers precisely the same signs that their seeing pupils have before their eyes. The first volume is about 14 inches long, 12 broad, and 4 thick. It consists of 98 pages, each containing 17 lines of letter-press, or 4 staves of music. The length of each line is about 11 inches.

In using the book, the music should be read with the left hand above the right, that the signs above and below the stave may be readily felt.

A MARINER'S COMPASS. *Price* 7*s.* 6*d.*

This little instrument is similar in shape and size to the pocket Mariner's Compass in common use, viz. about three inches square, and one inch thick. Its principal use to the blind is to enable them to study geography more correctly than could be done without its aid; but it has sometimes been employed to help a blind person to find his way when he has been walking without a guide and has missed his road.

To ascertain the *north* of the horizon, the compass should be placed upon a table or other steady object, and the lid having been opened, a few seconds should be allowed for the needle to settle, when the small knob on the rim of the box should be pressed, which will at once stop the needle. A small dot will be noticed near one extremity of the needle; this dot is to show the end that points to the north.

To see if the needle had settled before it was stopped, the box should be turned round so that the right-hand side may be placed where the left hand was, and then another observation should be taken as before. If the two observations agree, it may be assumed that the correct point has been found. If they differ, a third observation must be taken, that correctness may be ensured.

The needle points out the north of the *horizon*, and not the word north on the box. The printed paper, containing the names of the thirty-two points of the compass, is placed in the box, that the relative positions of the points with regard to each other may be learnt.

A Tangible Weather Guide. *Prices* 1*s.* *and* 2*s.*

The above admirable contrivance indicates whether the atmosphere is dry or damp, and therefore it points out whether or no it is probable that there will be rain during the day.

The correctness of its indications is surprising; and as it is the only instrument by which the blind can get an idea of the probable state of the weather, its value is far from being inconsiderable.

The Weather Guide consists of a cardboard model of a church or of a cottage. The model has two doors. Out of the door at the right-hand comes a figure, to the touch like a doll, which act indicates that the atmosphere is damp; and out of the door at the left-hand a similar figure comes when the air is dry. The figure in the right-hand door looks like a man in a great coat, and that in the other door like a woman dressed for a walk in the sunshine. To the touch, these figures present little difference, but the opposite doors out of which they come afford sufficient indication of the state of the *weather*.

Should the action of the figures become deranged, it may easily be regulated by attending to the instructions at the back of the Weather Guide.

Needles for the Blind. *Sixpence per packet.*

These needles differ from those in common use, in that they have a small oblique opening in the eye, into which the thread is easily pressed. The sections of the eye closing from within prevent the thread from slipping out.

A loop is made by the thread being held distended with the thumb and forefinger of the right hand. The needle, being held in the left hand, is placed in the loop, with the small opening in the eye of the needle against the thread which is then pressed into the eye.

The needles are made of different sizes, and may be had in numbers corresponding to those generally sold.

THE LEGAL POSITION OF THE BLIND.

The exact status of persons without sight, in the eye of the law, is far from being clearly defined. That they are not in the same position as ordinary citizens is shown by the existence of

certain Acts or statutes which provide exceptionally for the Blind and for other specified classes.

It is true that these Acts are, for the most part, very obscure and of little importance; but there is one matter about which there ought to be no mistake, and that cannot be too widely known, viz. *the way in which a blind man should make a will.*

The blind person having signed his name or affixed his cross to the document in the presence of two persons, those persons should sign the paper as witnesses of the act, putting after their names these words:—"This will having been read over to the testator in our presence, he being blind." Of course the witnesses would put before their names, "Witnessed by us." Should a cross be affixed instead of a signature, some one should write the name of the testator before it, adding the words, "his mark."

In all cases in which it is practicable, it is better to obtain the aid of a solicitor in making a will; but even under such circumstances it might be well to direct his attention to the foregoing remarks.

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